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An Introductory Address

ON

THE POWER OF OBSERVATION IN MEDICINE.

Delivered at the Opening of the Winter Session at St. George's Hospital on Oct. 1st, 1902.

BY THOMAS T. WHIPHAM, M.D. OXON.,
CONSULTING PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—It will be within the recollection of many here present to-day that a few years ago, and on a similar occasion, Mr. C. T. Dent remarked in connexion with introductory addresses that it was unlikely that they would ever be abolished at St. George's Hospital, because at the conclusion of each annual address the majority in favour of their continuance is increased by one. The idea mightily commended itself to me at the time; but I little thought then that I should be so soon caught in the trap which I had, with such malicious pleasure, assisted in setting for others. The result is that I have had the honour of being again selected by the members of the Medical School Council—if it be allowable to use a modern expression merely for the purpose of protesting against it, to "voice" them at the opening of the session. As each 1st of October comes round, and one wades through page upon page of the ponderous advice which is so lavishly proffered to the would-be student of medicine in the various institutions where introductory addresses survive, one is lost in wonder as to what kind of man he would be who had assimilated all the precepts laid down for him, and what must be his power of assimilation supposing that he had succeeded in doing so.

It is no part of my office to-day, and it certainly is very far from my intention, either to preach to you or to lecture you. That may well be left to the members of another profession. *Ne sutor supra crepidam.* I am here simply to act as the mouthpiece of the Medical School Council—to say to you to-day what has often been said before and what will, let us hope, often be said again. The touch on the present occasion may be faltering and feeble, but the note rings out clear and true, and the sound is the sound of greeting and welcome. Greeting to those who are assembled around us once again, who have been our colleagues in our work during the year which has gone, who have shared in our sorrows have rejoiced in our joys. Many of them are united to us by the bond of friendship, a bond which we trust will prove firm and abiding, until

> "..... that old common arbitrator, Time,
> Will one day end it."[1]

Welcome—aye, a hearty welcome—to those who have to-day been enrolled in the ranks of the medical profession as students of St. George's Hospital. Putting aside all high-falutin' and, to use Milton's expression, anything "writ large," we welcome you to a profession which will honour you in proportion as you honour it, will value you as you value yourselves, will demand from you all that is best in you, and will confer on you in return that measure of success and prosperity to which your tact and your industry and your ability entitle you.

Would that I could say that the angel of death had passed over St. George's Hospital since our last gathering. We deeply deplore the loss of two of our most able and promising students: Humphry Haward and Edmund Bond have passed to their rest, to the inexpressible sorrow of all who had known them.

We heartily welcome back to his old school—and no one more heartily than I do—Dr. Frederic W. Hewitt as physician anæsthetist to this hospital. Those of us who knew him in his student days predicted for him a success in his professional life as brilliant as that to which he has so deservedly attained. His scientific treatment of anæsthetics and their administration marks a new departure in that branch of practice to which he has especially devoted his attention. The recognition by the King of his services to the profession and the public has been hailed with approbation by his personal friends and by the profession at large. The exercise of his skill on the occasion of the operation which His Majesty has recently undergone was greatly instrumental in preserving to the empire the life of its monarch. In Mr. Norman G. Bennett, as assistant to the dental surgeon, the hospital may be congratulated on having secured the services of a gentleman of high standing in the branch of the profession which he has chosen, of a man of superior abilities actuated by a conscientious devotion to his duty.

In the distribution of honours St. George's Hospital has very properly come in for its share. Sir William H. Bennett has been decorated for good work in a good cause. Sir Isambard Owen has received a similar distinction in acknowledgment of that masterly organisation, that unceasing labour in the great cause of education, which have culminated in the foundation of the University of Wales. This has been one of the chief objects of his life, and to it he has devoted the best years of that life. He has the warmest congratulations and the sincere wishes of his friends that there may be for him many years of happiness and success as its Senior Deputy Vice-Chancellor. It is a good sign of the times when any particular branch of science receives due recognition at the hands of the State, and, while heartily congratulating him, we shall all rejoice that the honour of Knight Commander of the Order of St. Michael and St. George has been conferred upon Horace Henderson Pinching for extremely good work extending over many years, directed chiefly to the improvement of sanitation in Egypt. Two very great honours have within the last few months been won by St. George's men. Dr. Arthur John Jex-Blake has this year been elected Radcliffe Travelling Fellow at Oxford, and Dr. Arthur Latham has, in conjunction with Mr. West, the assistant treasurer of the hospital, out of 160 competitors, obtained the King's first prize for essays on the subject of sanatoriums for tuberculous patients.

The board of governors has decided, in the interests of the patients and of those whose duty it is to look after them, to refurnish the wards of the hospital and to install throughout the building that greatest of modern adaptations, electricity, as a source of artificial light. In this way much has been done to minimise the vitiation of the air in the wards and to promote the welfare and comfort of the inmates of the hospital. At the cost of £300 Mr. Peirse-Duncombe has most generously established in the medical school, at the disposal of the staff, one of the more modern scientific appliances—viz., a Photo-micrographical laboratory. This has been placed under the direction of Dr. Harold Spitta, the distinguished son of a former and highly esteemed pupil of the hospital. By the great liberality of Mr. West, the assistant treasurer, the hospital is now in possession of a complete apparatus for investigations as to the value of the Roentgen rays in medicine and surgery. These munificent gifts place the hospital in this position—viz., that no other school is better equipped with such indispensable aids to modern scientific research.

Having regard to the all-important question of public health arrangements have been made for the instruction of candidates for its diploma. The department is under the superintendence of Dr. C. Slater, Dr. L. C. Parkes, Mr. J. A. Gardner, and Dr. Harold Spitta. A clinical investigation department has been established for the convenience of medical practitioners, whether they have received their education at St. George's Hospital or not. With the view of emphasising the supreme importance of the study of pathology the board of governors decided not long since to assist by a grant of money in the work of remounting and re-labelling the specimens on the shelves of the museum and it is a great satisfaction to be able to announce that this much-needed revision is rapidly approaching completion. A goodly record this of progress and improvement during the space of 12 months and a sufficient guarantee that St. George's Hospital has done its best to keep abreast of the times and to maintain its position among the schools of this great metropolis.

In the few remarks which I am bidden to make to you it will probably be more profitable to take a practical rather than a theoretical line, as being more likely to prove attractive to those to whom I must more especially address myself to-day—to follow example rather than precept.

I have said that it is not my intention to preach, and yet for all that I shall choose me a text, taken from the writings of no man—a text which was one of the many wise

[1] Troilus and Cressida.

sayings of a great physician, one of the greatest of the century which has just closed. Sir William Gull one day, when in conversation with a colleague, said, "In medicine we make more mistakes by not looking than by not knowing." It sounds like an aphorism of Hippocrates, and I am not sure that even the great Father of Medicine has bequeathed to us one more pregnant with meaning, more universally applicable, or one of more practical utility in medicine and surgery. The aphorism applies not only to medicine; it is equally true in various callings in life, and more especially so, perhaps, in those professions in which an enemy is, if I may use the expression, the *raison d'être* of their existence—in the Navy, in the Army, and—may I add with all due reverence?—in the Church also. The power of being able to see and to appreciate the exact value of the surroundings is of great importance in all ranks of life, and of supreme importance in those professions in which the necessity for organising an attack or preparing for defence forms the chief part of the routine of active service. It may be that the time at a man's disposal for exercising this power is limited to seconds; it may consist in patient and laborious observations extending over a long period of years. Fortunate is the man who is by nature endowed with both. His own reputation, the life of a fellow creature, the existence of a nation may depend upon his ability to use them.

The faculty of looking is not bestowed upon all of us in equal degree. There are those who neither possess it nor can they acquire it, and these are not for the profession of medicine. They merely "see men as trees walking," or, as Shakespeare so graphically describes the somnambulism of Lady Macbeth—

> "You see, her eyes are open,
> Ay, but their sense is shut."

Such persons should doubtless seek other and less responsible avocations. "Every man is as God made him and oftentimes a great deal worse." "According to my idea," said Napoleon, "a physician, like a general officer, should be a man possessing great power of discernment and observation which will enable him to discover the strength and position of the enemy." Some men are especially gifted with this power of discernment, but that is no reason why those who are less so should be discouraged. In all probability they are not entirely wanting in some power of observation. Fortunately for themselves they can be taught to cultivate it, just as most boys can be taught to swim; the power is innate and it only requires a little teaching and confidence to call it into action.

The cultivation of the power of observation in such professions as the Navy, the Army, and Medicine is essential to success, and perhaps more so in medicine than in the services, seeing that the difficulty in tracing the intricacies of disease is, as a rule, greater than the difficulty of discovering the position and the strength of the foe. From the earliest days of man's existence upon earth the phenomena of nature have been within the range of his vision, but the world had to wait until the year 1642 of the Christian era for the birth of the man from whose momentary glance at the fall of an apple the laws of gravitation were to be revealed to mankind:—

> "Nature and nature's laws lay hid in night;
> God said: 'Let Newton be,' and all was light."[2]

General Baden-Powell, in his admirable little treatise on scouting, writes:—

> It is just like training a man for a race. The trainer can tell him what he ought to eat and what to avoid and how much daily exercise to take, but if the man does not carry out these instructions for himself he might just as well stop at home and eat dumplings as try to be a runner.[3]

Let anyone without experience go out to pick up plovers eggs in the field; he will return, after a long and toilsome search, in all probability with an empty basket; not because there were no plovers' eggs, but because he had no eyes to see them. Give him a little training of his power of observation and he will speedily fill that basket with a booty which, with his untutored eye, he would most likely have crushed with his foot. The importance of being able to comprehend the whole situation at a glance, of being able at the moment to seize upon some apparently trivial circumstance which might easily escape the notice of a person unaccustomed to exercise his powers of observation, cannot be over-estimated, and in illustration of my meaning let me again quote Baden-Powell:—

> I was once acting as scout for a party in a desert country, where we were getting done up for want of water. I had gone out two or three miles ahead, to where I thought the ground seemed to slope downwards, but except a dry shallow watercourse, there were no signs of water. As I was making my way slowly back again I noticed a scratching in the sand, evidently recently made by a buck. The sand thrown up was of a darker colour, and therefore damper than that on the surface. I dismounted and scooped up more with my hands, and found the undersoil quite moist; so water was evidently near at hand and could probably be got by digging. But at that moment two pigeons sprang up, and flew away from a rock near; full of hope I went to the spot, and found there a small pool of water, which yielded sufficient for the immediate requirements of the party.

Let me give you one more illustration from the same author:—

> I was riding one day across an open grass plain in Matabeleland with one native, scouting. Suddenly we noticed that the grass had been recently trodden down. Following up the track for a short distance it got on to a patch of sandy ground and then we saw that it was the spoor of several women and boys walking towards some hills about five miles distant where we believed the enemy to be hiding. Then we saw a leaf lying about 10 yards off the track; there were no trees for miles, but there were, we knew, trees of this kind at a village 15 miles distant in the direction from which the tracks led. Probably, then, these women had come from the village, bringing the leaf with them, and had gone up to the hills. On picking up the leaf it was damp and smelled of native beer. So we guessed that according to the custom of these people they had been carrying pots of native beer on their heads, the mouth of the pots being stopped with bunches of leaves. One of these leaves had fallen out, but we found it 10 yards off the track, which showed that at the time a wind had been blowing. There was no wind now, but there had been about five o'clock in the morning; it was now nearly seven. So we read from these signs that a party of women had brought beer during the night from the village 15 miles distant and had taken it to the enemy on the hills, arriving there about six o'clock. The men would probably start to drink the beer at once (as it goes sour if kept for long) and would by the time we got there be getting sleepy, so that we should have a favourable chance of reconnoitring their position. We accordingly followed the women's tracks, found the enemy, made our observations, and got away with our information without any difficulty.

A more astute and carefully-worked-out operation could scarcely be imagined and it was the outcome of the cultivation of his power of observation by a man who has eyes to see.

A similar example occurring in civil life was recorded not long since in one of the daily newspapers. The driver of an express train met on the road a goods train, and as the two trains rushed past one another he saw at a glance that something had gone wrong. He noticed that the goods train was a short one and that its engine was a powerful one, much more powerful than the few trucks behind it required. He at once closed the regulator of his own engine and was able to pull up the express just in time to avoid a crash into a number of trucks, on the other side of a curve, which had accidentally become detached from the goods train. To multiply instances of such quick observation would be easy. To weary you would be easier still. These examples are amply sufficient for the purpose.

"Eyes first, then hands, tongues last and least," is the well-known advice often given to his pupils by the late Sir George Murray Humphry of Cambridge. Few men have possessed this faculty of observation to a greater degree; no man more thoroughly utilised it in his investigation and treatment of disease. He had more eyes in his head than most people, and he made use of them, every one. Humphry in this phrase wished, as it would seem, to emphasise the importance of a rapid appreciation of surroundings, as compared with a minute and detailed examination by palpation or the voluminous history of a variety of symptoms, the majority of which probably only exist in the imagination of the narrator. What a man sees he can be more or less sure of; what he feels with his hands may be a matter of doubt in dealing with diseases of the human body; what he hears in the history of a case may be altogether erroneous and misleading. Such may, I think, be an amplification of Professor Humphry's phrase. At the same time he was the last man to disparage a carefully-expurgated record of facts, without which diagnosis and treatment would be simply impossible.

The man who lacks this power of looking is the man who cumbers himself with details. We know him in the wards of the hospital and we come across him later—in examination time. He looks into his ink-pot, he looks on his foolscap as he writes out an elaborate history of a trifling ailment, he looks last where he ought to have looked first—at the aspect of his patient. There is little to be done for him, no more than is to be done for the man who is devoid of the sense of humour, who can never see a joke. He must be left to his details. "Ephraim is joined to idols, let him alone." Fortunately for the public, such men are probably in a considerable minority and the greater number of students do, by industry and training, acquire much of this power of observation. The eye becomes gradually educated as it does in

[2] Pope.

the game of cricket, in shooting, or what not, and there is no ground for despair if in the end the student finds himself unequal to a competition with one who is specially gifted. We have, one and all of us, in many things to be content with a respectable mediocrity when we should have liked to excel.

Now it is by no means impossible for a person outside the ranks of the medical profession to be so far skilled in prognosis, in consequence of having cultivated, quite unconsciously perhaps, the power of looking, as to be able in some cases to predict the event of a disease, the nature and pathology of which are to him unknown quantities. There was, when some of us here to-day were young, a nurse in King's Ward, Mrs. Cran. She was in those days, and I venture to think she would be now, as good a nurse as it is possible to have. As students we would occasionally apply to her for information respecting patients in the wards. Her reply to our questioning would often be something after this style: "I don't know what's the matter with him, but I know he's going to die." From my own recollection it was uncommon for her to be far wrong in her prognosis, whether favourable or otherwise. It was long training and careful observation that enabled her to forecast the future. The possession of "a pair of double million magnifyin' gas microscopes of hextra power," without which Sam Weller, with all his acuteness of vision, was unable "to see through a flight of stairs and a deal door," may not have been vouchsafed to us, but judging from the instance just mentioned it is possible for the less appreciative among us to attain by training and perseverance to those three essential requisites of the physician—

"An eagle's eye, a lady's hand, a lion's heart."

I have chosen as my text a saying of Sir William Gull; let me supplement it by an illustration of the quickness of his power of observation. He had been called into consultation in the case of a lad who had been ill for about a week with fever; otherwise the symptoms were indefinite. He looked at the boy keenly for a few moments, with the body fully exposed; then he placed his hand on the abdomen, and then, having listened attentively to the chest, he retired from the sick room to talk over the case with the doctor in attendance. Now the doctor was not one of those who are characterised by a retiring disposition, and so he at once proceeded, with much confidence and many (to him) irresistible arguments, to set forth his opinion that they had undoubtedly to do with a case of typhoid fever. Sir William Gull listened in silence to all he had to say and then in his impressive manner replied, "Go back to your patient and look at his belly." He had seen at once that the abdomen was free from distension; he had felt that it was unresisting to pressure, and he in consequence excluded the probability—even almost the possibility—of typhoid fever. The patient shortly afterwards died, the victim of acute tuberculosis. "We make more mistakes by not looking than by not knowing."

In our profession the fact that a man is able to see what he looks at no doubt contributes very materially to his success, for it must be borne in mind that in the management of a patient it is not only his disease that has to be taken into consideration but his idiosyncrasies and his peculiarities also. Is he shy and retiring? Is he vain and self-confident? Is he hot-tempered and violent? Unless the practitioner is sufficiently observant to have noticed the peculiarity in each case, and possesses the tact and ability to deal with it, he is not likely much longer to retain the individual as one of his patients. By neglecting the aspect of his patient he may deprive himself of the power to render such assistance as his science and his art might be expected to afford. A highly educated physician or surgeon who is wanting in the power of observation may fail, so far as the patient is concerned, where an accurate observer of inferior abilities and attainments will achieve a brilliant success. The necessity for it is perhaps never more fully realised than in the work which devolves upon the medical officer to a life insurance society, and in no branch of medical practice does it stand him in greater stead; in no branch has he better opportunities of testing its value. The duty of a medical officer to an insurance society is not only to detect, as far as may be, the symptoms and signs of incipient disease—a task often of considerable difficulty—but also to form a just and accurate moral estimate of the applicant for a policy. He should be able at his interview with the candidate to judge, for example, how much reliance is to be placed on the answers which a person in pecuniary difficulties and anxious to raise money on a policy thinks fit to return to the questions which are put to him.

Few phrases are, I think, more expressive than the one used by Sir Thomas Watson to describe that remarkable condition of muscular weakness and nervous prostration which so often accompanies different forms of acute and chronic diseases in their later stages. He says that in such circumstances the "patient sinks down in the bed," and in those five words what a picture he paints for those who can see. The whole story is told in a sentence. One can see in a moment most of what has already befallen him, all that at present concerns him, all that his short future in this life is likely to bring him. He is down in the bed because he is unaware that he is so; he is down in the bed because he is powerless to raise himself higher; his sensation is blunted and his feeling benumbed; apathetic and feeble, almost to unconsciousness, he lies utterly regardless of all that surrounds him. But now—

> "It is too late: the life of all his blood
> Is touch'd corruptibly; and his pure brain,—
> Which some suppose the soul's frail dwelling-house,—
> Doth, by the idle comments that it makes,
> Foretell the ending of mortality."[3]

The time for the exercise of the faculty of observation is when danger is impending; afterwards it may be too late to retrieve the position. Prompt recognition of the first signs of evil to come is of supreme importance and the failure to appreciate at the moment some apparently insignificant fact may be fraught with disaster to a reputation and involve the possible loss of a life that might be saved.

Let me take an example from every-day life: the occurrence of two or three herpetic vesicles at the angle of the mouth in a patient who comes under observation chiefly on account of high fever and without definite signs pointing to any particular disease. Not much to look at, perhaps, but it affords to the man who has eyes to see it an almost certain indication that typhoid fever may be eliminated from the patient's possible ailments, and that in all probability a few hours will bring forth the physical signs of pneumonia. To take the very common symptom—one of great value as having an important bearing both on prognosis and treatment—that the patient lies with his knees drawn up in the bed. It is a position which at once attracts the attention of him who has eyes to see. Yet it not infrequently escapes the notice of the student and—shall I say it?—of the qualified practitioner also. It seems such a trifling occurrence and so common that it makes no impression on him who is unable to look. This change in the position of the legs should speak volumes to him who is in charge of the patient. It is possibly a fact of great significance; it may indicate two diametrically opposite conditions. It is a sign of hopeful augury on the one hand, and on the other one of grave import. It may mean that the peritoneum is inflamed, the flexion of the knees and the hips serving the purpose of relaxing the abdominal muscles and so relieving the pressure on the tissues that are inflamed. Regarding it as a sign of favourable import, we see in this alteration of posture the evidence of returning vigour, of recovery from the baneful effects of a specific fever on the nervous system, as the result of which the patient becomes aware that his extended position is irksome to him and with returning strength makes such changes in it as his wasted and enfeebled muscles permit. Again, note the sharply outlined features of the pallid face, the flush on the cheek, the bright lustre of the eye, the faintly-blue tint on the lips, and the probability of tuberculosis is clear at a glance. Observe the dry skin, parchment-like in appearance, the, if possible, still drier lips, which the sufferer endeavours to moisten with a tongue that cleaves to his mouth, the emaciation of the body, the wasting of the limbs, and the presence of diabetes is almost a matter of certainty.

But just a word by way of caution to the junior members of my audience. Let it not for a moment be supposed that from a momentary glance at the aspect of a patient a diagnosis can be made. Aspect, without doubt, conveys much valuable information, but diagnosis can only be made by the careful consideration of all facts bearing directly or indirectly upon the case and by the adoption of such methods and appliances, whether ancient or modern, as are likely to assist in the solution of the problem.

[3] King John.

While fully recognising the great value of the power of rapidity of observation there is the other form, of no less value, in which rapidity plays no essential part. It is that capacity of patiently and accurately noting and classifying facts which, after 12 years of unceasing toil, brought about that great discovery which has rendered the name of William Harvey immortal for all time. Rapidity of observation is essential under circumstances of sudden emergency or danger; careful and laborious observation, combined with a systematic grouping of facts, is indispensable to the unfolding of the secrets of nature.

Many here to-day can recall the extraordinary success to which but a few years ago Sir Spencer Wells attained in his operations on the abdominal cavity. Many surgeons, by his permission, witnessed them. Those who watched his attention to details saw that his success was dependent upon scrupulous cleanliness. He excluded, as far as was possible in those days, all sources of contamination by dirt or infection. He allowed no one to be present at his operations who had within a specified time been in contact with a person suffering from an infectious disease or who had attended a post-mortem examination. He was most particular in rendering everything—his instruments, his sponges, his dressings—as clean as in those days he knew how to make them. The result was that his percentage of recoveries was up to that time unprecedented and with him opened a new era in abdominal surgery. The question then arose, What is cleanliness in surgery? and it set many men thinking. It set one accomplished observer looking about him—one who, like Harvey, was to spend long years in collecting and arranging his facts, who, aided and guided by the light which William Budd and Pasteur had thrown over the subject, was to be the first to reveal to the world the part played by the bacterium in the operations of surgery. To protect the exposed surface from contamination by bacteria and their products constitutes that cleanliness which Sir Spencer Wells was so largely instrumental in establishing and to which so many have been indebted for their lives. Such are the results of observation on the part of William Budd of Bristol, who in 1847 began his investigations on the specific poison which he believed bred and multiplied in the human body, and which by this process of breeding and multiplying constitutes the condition known as fever; of Louis Pasteur, who after an interval of years pursued Budd's observations still further and demonstrated their value in preventive medicine; of Joseph Lister, who, as has so often been said of him, has revolutionised surgery among civilised nations.

A great day in medicine was May 14th, 1796. On that day matter was taken from the hands of Sarah Nelmes (who had been infected by her master's cows) and was inserted into the arms of James Phipps, a healthy boy of eight years old. "It was really the birthday of vaccination." There were those in some of the farms in Gloucestershire who had seen and noted that persons who had suffered from cow-pox were but little liable to be affected by small-pox, and in the course of time this had become a matter of popular belief. Again the world had to wait for the man who could see the real meaning of what those simple country folk had seen for many a day; who could appreciate the import of those inoculation experiments made by Benjamin Jesty of Downshay upon his wife and his sons; who, given the premises, could draw the conclusion and thus earn for himself the eulogy of Pope—

> "A wise man, skilled our wounds to heal,
> Is more than armies to the public weal."

Quick to see, prompt to act—the one the offspring of the other, the one the complement of the other—might serve as an appropriate motto for the profession which you have adopted to-day and would keep ever present to the mind of each member of it the great truth that the man who is not advancing is most assuredly falling behind; it would maintain and confirm in us that dignity which has been assigned to us—

> "Inter homines sapiens inter sapientes medicus."

I feel, gentlemen, that I have laid myself open to the criticism that in my remarks I have borrowed too freely from the writings of others. I accept the impeachment. But when the writings are the writings of men who by what they have seen, by what they have thought, and by what they have done have inscribed their names upon the scroll of fame, I would ask what better could I have done. I would, moreover, humbly submit for your consideration and in my own defence that "it is folly to expect men to do all that they may be reasonably expected to do."[4] I have chosen as my theme the power of observation not so much because it is uncommon but because it is so often neglected. "True medicine," says Sydenham, "consists in the discovery of real indications rather than in the excogitation of remedies. Those who have neglected this have put arms into the hands of the empiric and taught him to imitate the physician."

Turning, lastly, more especially to those whom it is my privilege to welcome to-day, let me impress upon them, at this the commencement of their career, that they must never lose sight of the fact that in all great institutions there are many traditions to be affectionately cherished, to be worthily upheld, and that in this respect St. George's Hospital is by no means an exception. Examples in abundance may be found in the lives and in the deeds of those who have preceded us, who have had so large a share in raising their hospital and its school to the position which it occupies in this city of London.

> "Lives of great men all remind us
> We can make our lives sublime,
> And, departing, leave behind us
> Footprints in the sands of Time."[5]

An Introductory Address

ON

THE ADVANCE IN SURGERY DURING 30 YEARS.

Delivered at the Opening of the Winter Session at Yorkshire College, Leeds, on Oct. 1st, 1902,

BY A. W. MAYO ROBSON, F.R.C.S. ENG., L.R.C.P. LOND.,

EMERITUS PROFESSOR OF SURGERY IN YORKSHIRE COLLEGE.

LADIES AND GENTLEMEN,—Perhaps no more honourable task could be imposed than the difficult duty that my colleagues have called on me to perform, of delivering an opening address in my *alma mater*, not only before a mixed audience, but also before a number of professional brethren who were my fellow-students 32 years ago, and others who were my colleagues during a great part of the period, now over a quarter of a century, that I have been teaching in the Leeds School of Medicine and in the Leeds General Infirmary. The difficulty of the task is, however, considerably tempered with pleasure in knowing that my friends of so many years' standing have shown their confidence in a colleague who is still working among them to perform an important function that is usually relegated to some distinguished stranger.

It used to be the custom when I was a student for the orator of the day to devote a great part of his address to advice to those who were about to enter on their duties, but Tennyson's verse so amply expresses my views on the subject that I refrain from giving a sermon even were I able:—

> "Others' follies teach us not,
> Nor much their wisdom teaches,
> And most of sterling worth is what
> Our own experience preaches."

I must, however, congratulate you who are about to take up the study of medicine and tell you that you are entering into the ranks of a profession the aspirations and ideals of which are most noble and the work both public-spirited and unselfish. Although you may have trials and at times disappointment, yet you will have the consciousness of knowing that while you are earning your daily bread you are undergoing a course of mental discipline and continuing your education. You will not simply be pursuing a utilitarian art, but will have a wide field of natural history open to you, rich in physical and psychical phenomena, that will offer you ample material for research and will compel your

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[4] La Fontaine.
[5] Longfellow.

attention, brighten your imagination, and clarify your thinking powers. You will also have the satisfaction of knowing that scarcely a day will pass that does not give you the opportunity of doing good quietly without fee or reward and of serving your fellow men unostentatiously. It is not for me to make the calculation, even were it possible, but if the gratuitous work that is done by medical men, from the highest to the lowest, could be estimated at its commercial value it would, I feel sure, astonish the world.

I would also say a word to some of you who are just completing your period of study in the medical school as well as to those who have recently entered the ranks of the qualified. Let me counsel you to persist in your studies; in fact, to continue to be students. And in giving this advice I can at the same time truly say that from the time of entering on my medical career I myself have continuously been a student and hope to be a student to the end of my days. Just as you see post-graduates from other schools and other countries coming to observe the work and gain fresh experience here, so let me advise you to visit other schools and hospitals where you may pick up new ideas and new methods. Early in my career, as soon as I had decided to devote myself to surgical work and before I had ventured to do any serious abdominal surgery, when in fact, in the "seventies, that subject was still in its infancy, I felt that I must visit and learn from the great surgeons who were doing that class of work, and I cannot refrain from expressing my debt of gratitude to the late Thomas Keith of Edinburgh, the late Sir Spencer Wells of London, and the late Lawson Tait of Birmingham, all three of whom have passed to the majority and all of whom did such excellent work in their day. Their courtesy and kindness in pointing out to me their successes and failures, in demonstrating their methods, and in advising, in a thousand-and-one ways enabled me to do what any of you can accomplish at the present time—i.e., to start from a platform based on the experience of others, thus saving you the need of wading through failures before success is attained. Nor would I let the opportunity pass of expressing the deep sense of gratitude that I owe to the teaching and example of that master in surgical science, Lord Lister, whose name is one of the brightest ornaments of the nineteenth century and whose work will make that era stand out for all time as the surgical century. I look on the experience I have gained by my visits to foreign schools and hospitals, especially those of France and America, as among my most treasured possessions. Not only have I made lifelong friendships in various parts of the world and been able by subsequent correspondence and exchange of views to keep myself in touch with other workers, but I have gained new ideas and modified old ones, and I hope that I have got rid of insular prejudice and gained a wider view not only of my profession but of life generally.

Do not be in too great a hurry to begin practice before you have done post-graduate work at other hospitals and schools at home and abroad, and if you can possibly afford it give some time to laboratory work and pathology before settling down, as these will be accomplished only with difficulty and at great sacrifice in later life. When I was in America last year I saw a great deal of excellent surgical work, though I must say no better than can be seen in our own infirmary, but I came back full of admiration for their pathological departments, especially in the Johns Hopkins Hospital at Baltimore, in the Massachusetts Hospital at Boston, and in the New York State Laboratory at Buffalo. There, no means are spared to gain perfection and, thanks to the liberality of wealthy citizens in some cases and State aid in others, the means appear to be forthcoming whenever required. I cannot help contrasting our own comparatively poorly supported department, where not even sufficient support is given to endow a chair. Yet you must not think that pathology with us is neglected, for if you will look round our pathological museum, laboratories, bacteriological annexe, and lecture theatre you will see that, so far as the teaching of students is concerned all is there that can be required, and my colleague, Dr. Trevelyan, gives up a great part of his time and energy to the department; in fact, more than can reasonably be expected of any physician engaged in practice. There are, however, many problems of immense importance to the public awaiting elucidation which have to be carried out by careful research in pathological laboratories, and for this to be done effectually in any school there must be a skilled head of the department whose time is wholly given up to the work and whose mind is freed from the cares and anxieties of practice; in other words, a professor of pathology who while pursuing research work will have time to aid and supervise others working in his department. In matters of education the old masters believed in Sir Walter Scott's maxim, "The best part of every man's education is that which he gives himself," and students were expected to use their powers of observation unaided and to rely on themselves much more than in the present day, perhaps not altogether to their disadvantage.

If, however, we compare our medical school of to-day with the one that it replaced, we shall see what numerous advantages the student has now. In the one case, beyond the practical anatomy department there was nothing save museum, library, and lecture theatre, which at once shows how little attention was given in the school to practical work and how much time had to be wasted in listening to didactic lectures, as is still the case in some schools. Here our visitors will see that the well-equipped physiological and pathological laboratories, the bacteriological annexe, the elaborate and extensive anatomical rooms, and the chemical and biological departments, all show that practical work is replacing lectures and that the student in his earlier years is being taught to observe, to manipulate, and to think for himself, this being preparatory to his more important work in the hospital wards, where all his powers of observation and reasoning will be called into play and where knowledge is only gotten of personal labour. The surgeon or physician has to set his face against the bad example placed before him by the many, the end of culture for them being to nibble at science and assume a knowledge of it, to dabble in art and profess to be artists, and then to drivel over the glorious advances that have been made in the Victorian era. Our science and art will tolerate neither dawdling nor dilettantism. Shams can have no place with us; our knowledge must be real, thorough, practical, and, not least important, ready when wanted. I look forward to the time when examinations alone will not set the standard of knowledge, when cramming will be a thing of the past as being no longer necessary, when lectures as a method of teaching will be replaced by practical demonstrations, and when the medical student, emancipated from many of the subjects which now hamper his earlier years and encroach on his more important studies, will be less hurried in his clinical work, will have more time to reflect on what he sees, and will be more thoroughly and seriously educated for his life's labour—the prevention and treatment of disease.

It would not do for me to omit a reference to that burning question which is in the minds of everyone interested in the affairs of the Yorkshire College. I refer to the proposed dissolution of the Victoria University, for we must bear in mind that the Privy Council has not as yet given its sanction to the ambition of Liverpool and Manchester, and with many others in Yorkshire I should like to hope that it will not do so, for there can be no doubt that the Victoria University with its three colleges has done excellent work, has supplied a long-felt want, and has established a great reputation which will be hard to maintain by the three separate universities should the dissolution take place. I venture, however, to think that if the worst should happen a way out will be found for the Yorkshire College and it may be that although not of our seeking, the disruption would prove of greater benefit to us than either to Liverpool or to Manchester. The various departments of science, technology, arts, and law have justly the highest reputation for efficiency, and speaking for the medical department of the Yorkshire College I feel sure that the reputation of the Leeds General Infirmary and of the medical school never stood higher; moreover, I have full confidence that as good work will continue to be done with enthusiasm and zeal by those who are to continue and to follow some of us who are nearing, or have ended, our term of office. We have a large student roll drawn not only from the immense population of which Leeds is the metropolis, but also from various parts of the British Isles and from abroad, so that our work is not merely local but cosmopolitan.

Perhaps no more unfortunate remark ever fell from the lips of any man than when an eminent surgeon, since deceased, said, about 20 years ago, that he thought that surgery had attained its limits. Could he be with us now to see the work that is going on to-day what a very poor prophet he would find himself to have been. Even now, at the end of this most important quarter of a century for medicine, it would be dangerous to make such a statement.

for has not even the last decade shown us that it is possible to look right through the human body, to see the heart and lungs working, to trace the outlines of the skeleton and to observe wonders that before Roentgen's discovery would have been beyond belief.

As a surgeon I hope I may be pardoned if I refer to the advances of surgery which have been so remarkable since I entered on my medical career. I often wonder what he would think could one of the great surgeons of the past return and spend a week in our splendid operating theatres. His first surprise would be to see the patient sleeping quietly while the operation was being performed without fuss or worry. What a contrast to the terrible ordeal of the pre-anæsthetic days, when every moment of the operation caused agonising pain to the patient and the only chance of relief was by a merciful attack of syncope, and when efficiency had necessarily to be sacrificed to expedition. Anæsthesia is one of the greatest boons conferred on humanity, and the nineteenth century would have been a prominent one in the history of medicine if it had nothing else to record.

While on the subject I would crave a moment for a diversion as to the claims of the anæsthetist for greater recognition. What is the history in our own infirmary? In 1870 and, in fact, up to 1893 or thereabouts, any student, whether instructed or not, was allowed to give an anæsthetic, was, in fact, allowed to perform the only part of the operation involving risk to life to 75 per cent. of all cases, and it was only after considerable discussion that a special anæsthetist was appointed. Now we have five, who last year administered anæsthetics nearly 4000 times, the rules forbidding any unqualified person administering an anæsthetic in the institution except under the immediate supervision of a qualified anæsthetist. The public does not as yet perhaps fully grasp the fact that it is almost as important to select a good anæsthetist as a good surgeon, for in competent hands anæsthesia itself involves little or no more danger than a railway ride, but with the happy-go-lucky idea that anyone can give an anæsthetic, alarm, if nothing worse, will be certain to arise from time to time and the surgeon will often be severely handicapped to the detriment of the patient.

What would next attract the attention of our returned master would be the elaborate care and attention to detail in all the stages of the surgeon's work—the boiling of the instruments and everything that can be boiled, the sterilising by high pressure steam of dressings and sponges, and the great care which the surgeon, the assistants, and the nurses employ in purifying their hands and everything that may come in contact with the wounds. Perhaps at first he might be inclined to scoff at so many details, as, indeed, did some of his colleagues and many of his rivals when the author of antiseptic surgery made public his views, but the scoff would be again turned to surprise if he visited the wards a week later and found the patients looking well with normal temperatures and healed wounds; for he would contrast the old days when after such operations, even had they been conceived possible, the patients would in many cases have perished from the numerous wound complications that almost inevitably followed the surgery of that time and those that had survived would have been found suffering from fever and other sequelæ now rarely seen and usually avoidable. It was too literally true, even within my memory, that the mantle of the master descended to his pupil, as I can recall having a stained and gory coat of many colours and of many years' service handed on to me as my prerogative when in 1884 I was elected to the post on the full staff of the Leeds General Infirmary. I hope I did not give offence to my revered predecessor by wearing that coat only on one occasion and in immediately exchanging it for washable garments, but I do know that at the time I was looked on as presumptuous, to put it in the mildest way possible. What would the student of to-day think if he saw silk for ligatures and dressings for the wound taken straight out of the dirty drawers in the operating theatre and handed to the surgeon by the hospital porter, probably with unwashed hands. I think that he would be as much astonished as the old master who returned to see our house surgeons, dressers, and nurses clothed in clean sterilised gowns and wearing sterilised indiarubber gloves in order that their clothes and hands might not contaminate the wound or the instruments. Could he see the elaborate preparation of sponges and ligatures, the careful preparation of the surgeon and the patient, the careful hæmostasis, and the thousand-and-one details of suturing and application of dressings, I think he would feel that verily the times were not for him until he had returned to school. In comparing the present with the past of medicine and surgery and in attempting to forecast the future I have the advantage of being able from my own experience to contrast the work of 1870 with that of 1902. During that interval of 32 years so great have been the changes and so marked have been the advances that one cannot but feel a profound sense of gratitude that it has fallen to our lot to have lived and worked through this important period in the world's history and to have contributed in however so small a degree to the reformation which has occurred in our noble profession.

A comparison of the surgical work of to-day in the General Infirmary at Leeds with that of 32 years ago will, I hope, prove of interest, as it shows what a reformation in surgical thought as well as in the science and art of surgery has taken place in the last 30 years of the nineteenth century. If we compare the report of the Leeds General Infirmary for the years named we shall see not only that the mortality all round has lessened, but that in certain operations, had not a change come, their performance would have had to remain a matter of history, since the mortality was so high as to render them unjustifiable. Just as the number of operations has increased from 469 in 1870 to 4385 in 1901, so the all-round mortality has diminished from 6·6 per cent. in 1870 to 2·7 per cent. in 1901, although the magnitude of the operations performed has been in many cases infinitely greater.

An analysis of the hospital registers affords interesting and startling facts. For instance, in the 1902 report the following operations are recorded which have no place in the report of 1870: radical cure of hernia, of which no less than 109 cases are given, which means not only a saving of life and suffering but a restoration to efficiency of so many workers who would otherwise have been severely handicapped in the struggle for existence and only rendered possibly safe from the dangers of strangulation by the wearing of a cumbersome instrument. Of osteotomy, or division of bones, 38 cases are mentioned in the report for 1901. The late Sir James Paget once remarked when on a visit to Leeds that Leeds and Glasgow were chiefly noted for their crooked legs. Thanks to this operation our streets are much less disfigured by cripples and many otherwise useless and burdensome subjects are placed on the active list, for these deformities can be remedied with very little risk and with great certainty of success. Doubtless when insanitary areas are cleared away, cellar dwellings are abolished, and parents are taught the correct principles of infant feeding these deformities will be things of the past, but this happy state of affairs remains for the future. Fortunately we have an enlightened majority in our Leeds city parliament who have not hesitated to spend an enormous sum of money and to increase the rates considerably, even at the risk of offending the electorate, in order that insanitary areas may be cleared away to give place to healthy dwellings, and there seems to be good hope that with the cheap means of locomotion furnished by the electric trams many of the poorer residents will be able to enjoy the sunshine and pure air which God has provided alike for poor and rich and at the same time to carry on their wage-earning duties in the city. In order to attain the ideal, however, we must teach the people that to live in a healthy neighbourhood will not keep them clear of disease unless they give up intemperance, live healthier lives, and pay more attention to ventilation. At first sight it seems a curious fact that many of our cases of surgical tuberculosis come from health-resorts at the seaside and from agricultural districts, but when we come to inquire into the homes of the fisherfolk and of the peasantry and see their crowded bedrooms and living rooms, their crude ideas with regard to the use of windows, and their absolute ignorance of sanitation all wonder ceases. It seems to me that our Education Department has a great duty before it, hitherto wholly neglected, and if it would seriously take up the subject of teaching the nurses and mothers of the future the principles of infant feeding and the management of children much unnecessary misery and suffering would be averted and many valuable lives would be saved. Moreover, if some simple lessons in domestic economy, including plain cooking, could be made compulsory for all girls after they have finished their elementary school course I think we should find that to be one of the keys which would unlock the difficult problem of intemperance and domestic infelicity, as it would certainly be the means of preventing much disease.

To return to the hospital reports we note that 78 cases of removal of the vermiform appendix are recorded. The attention of the world at large has quite recently been prominently drawn to this subject by the illness of our beloved King. Now, although it would be wrong to say that the disease was unknown 32 years ago, for it was described by pathologists before that date, yet it is an actual fact that even 25 years ago the operation of removing the appendix for appendicitis was practically unknown, though we know that appendicitis with its complications was the cause of death in an immense number of patients who were said to have died from peritonitis. Even in the acute stage of the illness we are now able to save life in a very large percentage of cases by a timely interference, but in the quiescent period, between the attacks, the preventive operation of removing the appendix is almost unattended by risk, a record of several hundred operations of this kind showing no fatality. A reference to the hospital records of recent years shows that in this disease the public are appreciating the fact that prevention is better than cure. Of cholecystotomy and other operations on the gall-bladder for the removal of gall-stones and the complications caused by them 38 cases are recorded in the report for 1901. These operations were unknown 30 years ago. We in Leeds have had the proud privilege of helping to advance and to perfect the surgery of the gall-bladder, and in the General Infirmary patients from various parts of the world have sought and obtained relief. These operations have been the means of saving many lives and much suffering, for this form of disease is among the most painful that flesh is heir to. Prostatectomy for the relief of urinary obstruction is an operation that was unknown before 1885. It owes its origin to our late and much-lamented colleague McGill, whose name and reputation as a surgical genius add lustre to the Leeds School and in fact to British surgery. He not only originated the operation, but improved and perfected it, and those members of the profession who attended the meeting of the British Medical Association in Leeds in 1889 will remember with what natural pride he showed a number of aged patients in good health on whom the operation had been done. Operations on the intestine, such as the removal of considerable sections, from several inches to even two or three feet, for morbid growth or for gangrene, and various other operations on this portion of the alimentary tract too technical to mention here, are of frequent occurrence now, and bring relief or cure to many patients otherwise doomed to a most painful death. Stomach surgery had no place in the 1870 reports, but in the one issued in 1902 will be found no less than 94 operations for various diseases of the stomach. To this advance in surgery the staff of the Leeds General Infirmary have contributed very materially, both in the performance of original operations and in the perfecting of others. As showing the possibilities in this line of work we can point to one now living nearly two years after the removal of nearly the whole of the stomach for malignant disease (at the time of operation he had only at the outside a few weeks to live, yet he now enjoys his meals and to all appearance is in normal health) and also to many men and women restored to a normal state of health who but for surgical treatment must long ago have perished from starvation due to mechanical obstruction of the passage into or out of the stomach. In connexion with this line of work no more startling innovation can be noted than the direct treatment of internal bleeding from the stomach, for when general treatment and rest have failed to stop the hæmorrhage we are now able to open the stomach, to search for the bleeding vessel, and to ligature it, instead of standing idly by and watching life slowly slipping away. Nor can anything be more striking than the operative treatment of perforating ulcer of the stomach where the contents of the stomach, perhaps a full meal, have passed through the opening into the peritoneal cavity and the patient, who was doomed to death within 24 or 48 hours, is snatched from the verge of the grave by timely surgical interference in which the abdomen is opened and washed out and the perforation is securely stitched up. That the successful removal of part of the liver, of the spleen, and of the kidney is a possibility the reports will show you, yet these operations were not even dreamt of 30 years ago.

But our operative triumphs do not all consist of the removal of diseased parts, as we are able to construct and to build up. For instance, where a bone has been lost, say in the leg or arm, we can engraft and build up a new one, and even where a nerve has been lost or destroyed by disease or injury we are able to transplant a portion of healthy nerve and make good the injury. This operation also had its inception in Leeds, where the first operation of the kind was performed in 1889, a portion of living nerve being transplanted to make up the deficiency in one of the nerves of the forearm, thus restoring sensation and movement to a right hand previously paralysed and which must otherwise have been useless for life. Thanks to the work of Hitzig, Ferrier, Horsley, Jackson, Gowers, and others we are able to map out the site of disease and injury in the brain and spinal cord, and armed with that knowledge surgeons can often attack disease with precision and success. Were it desirable examples could be given of paralysed members being restored to usefulness, of irritating lesions causing convulsions being taken away, of inflammatory effusions and abscesses being localised and removed, and of many other painful and fatal maladies being successfully attacked, practically all these procedures having been first suggested and carried out within the period which I have named. Even a part of a diseased lung has been removed with success, and the evacuation of abscesses from within the chest is looked upon as quite an ordinary procedure, yet you would look in vain for these operations in the report for 1870. It would be thought that the heart would be quite beyond the pale of surgery, but so far back as the early "seventies" my distinguished colleagues on the consulting staff, Professor T. Clifford Allbutt and Mr. Wheelhouse, in the Leeds Infirmary successfully attacked an effusion in the sac surrounding the heart and drew off a quantity of fluid that was arresting the cardiac movements. But within the last decade cardiac surgery has made further advances and you will be astonished to hear that in no less than 38 cases have stab wounds and bullet wounds of the heart been stitched up with recovery from operation in 19 cases and complete cure in 13 cases, yet even when I was a student it was thought that the slightest wound of the heart must inevitably be fatal. The future has probably in store still further advances, for the possibility of opening the heart and dividing certain valvular obstructions which threaten life is even now under consideration. There are many other now well-established, useful, and successful operative measures to be found in the report for 1901, which I could speak of did time allow, that had no mention and which were in fact unknown in 1870. In the same way a reference to the registers shows that some surgical diseases, unfortunately too common in 1870, are now happily rare and in some instances have no place in the report for 1901. I refer to hospital gangrene, pyæmia, erysipelas, septicæmia, and other forms of blood-poisoning, secondary hæmorrhage, and such-like surgical misfortunes. No better examples can be given than that of tetanus, or lockjaw, for 32 years ago it was not very unusual to see this fatal disease follow even slight operations, yet during the last 20 years I have not seen a single post-operative case, all instances that have come under observation having occurred after neglected wounds received outside the hospital. In the same category may also be mentioned hydrophobia, which has been subdued in England by wise legislation. Perhaps in no class of cases has greater progress to be recorded than in abdominal diseases which formerly were for the most part treated in the medical wards. For instance, in 1870 and 1871 under the heading "Abdominal Section" no case is reported; in other words, the peritoneal cavity was rarely opened, and then only for ovariotomy and strangulated hernia; whereas in the year 1901 569 patients had abdominal section performed in this hospital for diseases of every organ contained within the abdominal cavity. The statistics of ovariotomy in this hospital 23 years ago were so unfavourable that tapping was frequently resorted to in order to defer the operation, and even in 1875 12 patients were thus treated, only seven having been submitted to the radical operation. Out of these seven five died, yielding a mortality of 71·3 per cent. On the other hand, in the year 1901 ovariotomy was performed 64 times with 60 recoveries, giving a mortality of 6·2 per cent.; and seeing that this includes malignant, gangrenous, and suppurating cases, as well as those of patients extremely ill in other ways, the mortality is one of which no hospital need feel ashamed.

Pasteur's preliminary work has effected almost as great a revolution in medicine as in surgery, for it has placed our knowledge on a sure foundation, and if the attention of the public is more attracted by the achievements of surgery, yet those who know realise that physicians have been able to serve the public equally well. Within the last 20 years there

have been many new departures in medicine, not only in casting off worthless and out-of-date methods, but also in occupying new ground; for instance, the serum treatment of diphtheria, tetanus, and typhoid fever, and, not least useful, the discovery of the cause of malarial fever and its conveyance by the mosquito, making it extremely probable that this bane of the tropics may be so modified or stamped out that regions hitherto uninhabitable by the white races may be opened up to civilisation and commerce. These cannot be termed even moderate achievements—they are triumphs. As the nineteenth century has been chiefly notable for the advances in surgery, so I venture to predict that the twentieth will be signalised by equal advances in medicine.

Preventive medicine has much to be proud of in the fact that the average life-time of males has been prolonged from 39·91 years in 1854 to 43·66 years in 1890, that is to say, a male exposed throughout life to the rates of mortality obtaining in England and Wales at present would on the average live at least four years longer than he would have done had he lived in the middle of the last century, and the important point is that these four years are added to the useful working part of man's life. By the same calculation the average prolongation in the life of women is extended to between five and six years. Professor Karl Pearson has recently compared the expectation of life in man between the present era and that of 2000 years ago, the latter being based on the ages at death of a large series of mummies concerning whom these particulars are known. If the comparison is to be relied on, the improvements in modern times are most striking, for he states that a man of 25 years old to-day lives on an average 15 years longer than a man of the same age did 2000 years ago, which means either that man of to-day is fitter physically and mentally, or that his surroundings are better. We know that the latter applies and we believe that the former does also. This is due to a variety of causes, such as better sanitation, healthier modes of living, greater temperance, the prevention of certain diseases, and the better treatment of others. I feel convinced that if only the public would contribute their share it would be possible to abolish nearly all the zymotic diseases. As an example of what might be in this country I may cite the fact that compulsory vaccination and re-vaccination in Germany have practically stamped out small-pox and it is a fact that in 1899 not a single death occurred from this disease in any large town of the German empire—numbering 54,000,000. The 28 deaths that did occur were near the frontiers and no epidemic was started by these cases, yet in England, thanks to permissive legislation, we have recently had serious epidemics and a large number of deaths to record from a disease that could with certainty be stamped out within a year. I think the time will come when it will be considered a criminal act knowingly to spread infectious disease just as it would be to give a dose of poison.

Could anything more clearly demonstrate the advances made by our medical colleagues than the present position of tuberculosis, first rendered possible by Koch's discovery? I remember, soon after beginning practice, being almost laughed at for insisting on the infectiousness of consumption, and when in the "seventies" I published a series of cases which were embodied along with other suggestive cases in the Collective Investigation Report of the British Medical Association, even then the infection of tubercle was doubted by many, but who would now dare to dispute the fact that consumption is only spread by Koch's bacillus? The discovery of the cause has led to a most happy diminution of the disease, and I venture to predict that within the next 50 years tuberculous disease will, like leprosy, become so uncommon that its complete extinction may not be an impossibility. The decrease of deaths from consumption affords a brilliant example of the betterment of the people from scientific medicine, and a table taken from the annual report of the medical officer of the West Riding county council shows very graphically the steady decrease of this disease. For instance, 3·25 per 1000, or 3250 out of every million of the population, died in 1850, whereas at the present time only 1200 out of the million die; in other words, there is a saving of life in consumption of about 2050 per million per annum in the West Riding of Yorkshire alone, and you must remember that the saving of life is in a great measure among the adults. Another disease, lupus or tubercular disease of the skin, which leads to those terrible deformities of the face so frequently seen in our streets, affords an example of one of the most recent triumphs of scientific medicine, for it has been discovered that the daily application of the light from a powerful electric lamp has the property of killing the bacillus and leaving a smooth healthy scar, but if taken early neither scar tissue nor deformity remains. Who could have prophesied, even five years ago, that within so short a time these new therapeutic measures would have assumed such an important position as to merit the formation of a special department in our hospital for the treatment of disease by light rays? Doubtless the future has still greater discoveries in store and medicine even still greater triumphs to achieve.

With the prolongation of life it would seem only natural that the diseases of middle and advanced age should become more in evidence, and this may be one of the causes why cancer appears to be more frequent. The discovery of the cause of this dread disease and its treatment are at present the burning questions of scientific medicine all over the world, and in my position as Vice-President of the Royal College of Surgeons of England it has fallen to my lot to take a part in the great scheme that is now being pushed forward in England for the discovery, if possible, of the cause, and the best means of treatment, of this terrible malady. The prosecution of this research has to be effected by voluntary means, so if there should be anyone in our community too heavily burdened with this world's goods or one who is prepared to make a sacrifice let him bear in mind that in giving support to this scheme he will not only be doing good to others, but may perhaps in his own person in later years be one to benefit by the researches he has aided by his superfluous wealth.

Just as surgery has taken over the treatment of many medical ailments in the brain, the chest, and the abdomen, so I venture to think that the physician may look forward to the day when the treatment of cancer will return to him and only rarely have to be accomplished by surgical means. Already that chronic form of malignant disease known as "rodent ulcer" is passing from the domains of surgery proper and is being cured by the Roentgen rays, and even the treatment of epithelioma, a more rapid form of malignant disease, is in some cases yielding to similar treatment, as we have been able to show in the Leeds Infirmary. As yet, however, surgery is the sheet anchor of the greater number of cancer cases and where it has been taken early and treated radically we can point to many patients living active and useful lives many years after the removal of undoubted cancer.

I hope that I have not wearied my audience by my brief and imperfect account of what was, what is, and what is to be in our noble profession. I trust, however, that I have shown how good work is being done and progress recorded in all branches of the profession and how each one of us contributes his discoveries and experiences for the common good, the spirit of our work being service and kindness and the great glory of our profession being that in a time of so much rivalry and selfishness it pursues a steady, philanthropic, and righteous course.

An Address
ON
KNOWLEDGE AND WISDOM IN MEDICINE.

Delivered at the Opening of the Winter Session of the Medical Department of the Owens College, Manchester, on Oct. 1st, 1902,

BY SIR DYCE DUCKWORTH, M.D., LL.D. EDIN.,

FELLOW AND TREASURER OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON; PHYSICIAN AND LECTURER ON CLINICAL MEDICINE AT ST. BARTHOLOMEW'S HOSPITAL.

MR. VICE-CHANCELLOR AND GENTLEMEN,—As a Lancashire man and a native of Liverpool I cannot regard myself as a stranger in the face of an auditory such as I now see before me. My medical recollections go back to a time when I knew some of the leaders of the profession in this city, Thomas Turner, Eason Wilkinson, Browne, Roberts, and others. Time puts a check on my desire to recall the names of many who have made Manchester famous in the

annals of British medicine, and it is happily less incumbent on me to attempt the task since it has so recently been well accomplished at the meeting of the British Medical Association in this place by Mr. Walter Whitehead. A perusal of his address may fairly inspire many of you who now listen to me with veneration for the medical traditions of this great city. The medical professoriate of the university of which this college forms certainly *pars magna* includes men who would bring distinction and lustre to any great school of medicine.

My duty to-day is not the first one which I have performed in this academic centre. Ten years ago I had the honour to hold the office of an examiner in medicine here, when I was associated first with that highly gifted man, Professor John Morgan, and later with his distinguished successor, Dr. J. Dreschfeld. Since that time I have been closely associated in the General Medical Council with one of the best physicians in recent years in this city, the late Dr. Leech, whose loss is so widely felt and deplored. The traditions of this faculty may be reckoned few, so far as time is concerned—some 30 years—but they are of the best. The Royal Manchester School of Medicine, however, now incorporated here, has, I find, no fewer than 116 years behind it, so that the faculty has thus absorbed all the traditions of medicine and surgery which this city affords. It may therefore go forward with certainty to add fruitfully to them.

I can hardly address you here and now without referring to what is surely a vexed question at the present time respecting the proposal to break the bonds which unite you academically with the affiliated colleges of Liverpool and Leeds. Early memories recall to me an abiding rivalry between this and my native city, a rivalry always honourable, though warm with a true Lancashire intensity. I stand here to try to consider this matter with the loyalty of a Lancastrian, tempered, I will venture to hope, by the even-mindedness of an imperialist long resident in the metropolis. Liverpool has made her decision and has determined to stand alone and to equip herself as an independent university. I feel sure that whether you regard this step as a wise and provident one, or are of the opinion that it is an unnecessary and possibly an imprudent one, you will not be long in following suit, and that you will shortly concentrate within this community of over half a million people all the academic features of this city and so establish the University of Manchester. Leeds will then have, I imagine, no choice left in the matter and I shall be surprised if the hard heads and stout hearts of Yorkshire fail to rise to the opportunity of constituting a vigorous university for the largest county in the country. I therefore include myself amongst those who regard this dissolution as fully within the purview of those who have reached my time of life, and I see no reason for grave concern as respects the outcome of it. I am aware that some of the authorities of this University, and others whose opinions carry weight, are convinced that these projects are unsound and little calculated either to promote learning or to foster a due respect for academic degrees. In considering this question the fact must not be forgotten that no new university can by any possibility be made a copy of an older one, for truly a *genius loci* attaches to the character and quality of each; and as Edinburgh is unlike Cambridge, so is Birmingham very unlike Oxford. Certainly no university of the future will ever resemble that curious but potent academic conglomeration which in its new form is slowly emerging in a corner of the Imperial Institute in London. I think your *genius loci* will carry you through in this city, and a like quality will determine both for Liverpool and Leeds their special needs and the several methods best fitted to meet them. I have therefore no apprehensions for the future welfare of any one of the three new universities. If a small German town of 25,000 inhabitants may have a university, surely these vast cities with their hundreds of thousands of people may have theirs. We may feel sure that whatever rivalry arises amongst these academic centres will in these days be of a wholesome character, that these seats of learning will respectively be directed by men of high ideals and attainments, and that they will not lapse to the level of mere high schools or institutions for cheapening degrees. The various benefactors, and no less a sound public opinion, will insist on nothing less than a high standard of excellence in each faculty. As I have remarked, the peculiarities of each of these new centres will more particularly mould the special features of the work to be carried on in them. Thus, we should look here and there for great developments in technology, electricity, engineering—especially in marine engineering in Liverpool—and in all the industrial arts, particularly with regard to chemical research; and we should expect to produce in no short period of time what we now have, to our shame, to import so largely from Germany—first, men as original investigators and linguists, and, secondly, various products wrested from nature by the skill and special training of such men in that country. As we daily find to our cost, such results are no longer to be attained by a continuance in our old-fashioned "rule-of-thumb" methods, by half-trained men, or by the inelastic and inadequate systems of many of our manufacturers; but they are to be won, alone, as I conceive, by the best products of these universities—that is, by men who have received a complete academic training; and this, for me, signifies a good deal more than a special education in any one line of study. Such a training, although open to all, will, I conceive, only be secured by those who bring the ability and energy to use it profitably, and who are prepared to devote the time which is absolutely necessary to complete it. University training, while it is the best, is no short cut to professional excellence.

I may appear to many of you to have wandered from any lines of thought which are appropriate to an occasion such as this, when I address new and older students of medicine at the opening of their winter session, but I will now try to show that my contention in respect of university training applies in no small degree to many of you. In the first place, it is to be regarded as certain that a university education is not primarily designed to fit men for purely technical and professional pursuits, and therefore for students to begin a career in them with the sole view of obtaining this specific instruction is to reduce their university to the level of a special college whose function is not to produce well-educated men. A university is a *studium generale*, and the entrance to the various callings in life, if properly designed, is preceded there by a course of the humanities as a mental training to enable students to profit promptly and to the full by their subsequent special studies. It is not too much to affirm that these preliminary courses, as they are more or less complete and thorough, shape and modify the after-life of each individual, leaving their mark upon him and aiding him at all points in his future career.

It is now the fashion of the more modern universities, and indeed of one of the older ones, to curtail the preliminary training and to substitute for it the examinations in literary knowledge gained anywhere and anyhow, with the result that in many instances an imperfect general education comes abruptly to an end. The student thereupon begins to specialise for his vocation in life, taking up in our profession various scientific subjects.

At this point we are met by two great opposing doctrines in respect of education, that which maintains the supreme importance of the humanities as the best agents for securing mental width and culture, including more especially an accurate study of the older classical languages, and that which denies this and urges the claims of a study of some branch of science and of modern languages as an equally efficient, or even a better, method for attaining this end. These conflicting doctrines have for some 30 or 40 years had their respective advocates, and practical expression has been given to them both in our schools and universities for this period. There has thus been time enough wherein to compare the results of each method. I am free to confess that I have long seen reason to doubt the assertion that the modern side in any educational institution produces men whose mental culture, width, and wisdom are the equals of those whose literary training has been conducted on the older lines. I acknowledge at once the necessity of a modern side as meeting the varied abilities and aptitudes of individual youths and fulfilling such requirements as must exist in all communities, but I demur to the oft-repeated and dogmatic assertion that a purely scientific training furnishes the mind with the equivalent in mental balance and acumen that is to be gained from an antecedent full course in the *litera humaniores*. The problem which meets us here in this, as indeed in other faculties, is how to find the time and the money which are requisite to secure a training on the old lines as a preliminary to the modern exactions of scientific and special studies. We may take note of the fact that the difficulty is satisfactorily met in most of the continental universities, seven years being

expended by the students in proceeding to a medical degree. Had we a similar system in practice in this country we should not encounter bachelors of arts who write and speak their own language incorrectly and are unable to construe a simple Latin sentence. Inasmuch as many of these graduates are not seldom fairly accomplished in science one wonders whether their arts degree is properly so-called. These misnamed degrees are certainly the fruit of the modern side in education and are the results of efforts to produce quantity rather than quality of graduates. It can hardly be a matter for surprise, then, if men whose general education is so defective, despite their arts degree, fail to maintain the traditions of medicine in public life as one of the learned professions.

Although the standard of general education for the average student has been gradually raised in recent years the accepted tests of it cannot yet be regarded as certifying an adequate equipment even for the ordinary practitioner who does not aspire to a degree, and when it is found that the requirements in this matter hardly exceed those which a veterinary surgeon or a pharmacist has to submit to we may rest assured that a good deal more remains to be exacted from the candidate for ordinary diplomas entitling to practise. It is, however, solemnly alleged that an increased stringency in this respect would largely and harmfully deprive the community of an adequate supply of practitioners. I will venture to join issue with those who hold this opinion, believing, as I do, that the secondary schools in these kingdoms can readily prepare their pupils for a much higher standard than that now demanded. If this can be done in other countries, why not in Britain? Such a course might possibly entail an additional year of study at school which would be of advantage in several respects to future students of medicine, and the time thus spent would certainly be overtaken by a more serious and appreciative grasp of the difficulties which await them in mastering the details of their scientific and professional studies. To realise this we need only to conceive the mental confusion and delay constantly experienced by an unintelligent appreciation of terms derived from Greek and Latin which are so largely used in science and medicine, and we thus find the explanation of the mis-spellings and false quantities which emanate from the pens and mouths of imperfectly educated students—faults which are little likely to be rectified in their after career. We are told, however, that the social strata which supply the rank-and-file of our profession are for the most part composed of those who demand of necessity that their sons shall as soon as possible become bread-winners, and that, consequently, our business as teachers is to equip them quickly for their work in life. If this is so we may fairly ask whether it be right to expect that such candidates should reach the standard of general education that is properly demanded from those who aspire to higher places and achievements in the profession. Should not the average man be content with an ordinary diploma? With every desire to produce men in our schools who possess a good general education, together with accurate general knowledge, we have to admit that there are, and probably always will be, many positions which have to be occupied where the duties and emoluments are of so humble a character that it is obviously too much to expect men with higher attainments to fill them. We must therefore rest satisfied, as I venture to think, with securing in the early future a better standard of literary training, together with the best and most practical clinical teaching that we can give to the ordinary student. As has been well said, "The majority of students cannot wait to be made philosophers before they become practitioners." My point is this. I would have the universities chiefly concerned in the training of the best candidates for our profession, and I would fain have their degrees regarded as honours, not carrying with them State qualifications to practise, but viewed as indications of distinctly higher attainments conferred on those already holding such diplomas.

Do not suppose that I entertain any doubt as to the value of scientific studies, whether regarded as a mental training or as an absolute necessity for approaching the art of medicine as practised in our day. I do not recognise, as some do, that there is an antagonism between the taste for literary and that for scientific studies, and I deny that the former is necessarily an unfitting equipment for the latter. Tastes and aptitudes certainly vary, but I suspect that the literary dunce will hardly make his way to the front ranks of science. I believe that the humanities not only "soften manners" and promote culture, but constitute an educational instrument which other studies cannot furnish—that they supply the key which opens the way to excellence in all other pursuits and secure those mental qualities which are likely to prove a saving grace amidst the pitfalls and problems of professional life.[1] We have been told recently[2] that "the scientific method purifies a past infected by prejudice, empiricism, and superstition," but I much doubt if the infections alluded to were in any degree the offspring of literary culture. They arose at a time when those who ventured on the pursuit of science came under the repressing hand of a dominant and inexorable ecclesiasticism. This was the main source of prejudice, empiricism, and superstition, and when this tyranny was overcome literature and science rapidly began to flourish in friendly alliance. If the universities fail to produce members of our profession who can embody this happy combination of literary and scientific attainments, where, indeed, shall we look for them?

Those of you who are just beginning your medical career have probably already felt somewhat appalled at the prospect which opens before you. The multiplicity of subjects and of lectures, the attendances in laboratories, dissecting-rooms, and museums in the earlier years, and the daily work in the hospital in the later ones, form a long vista indeed. Let me give you some assurance at the outset. Do not look too far ahead. Be content to give your mind now to the details of the several subjects you have first to deal with and do not be induced to apply the knowledge you thus gain to purely professional matters. For instance, it is a grave mistake to occupy the position of a surgeon's dresser or a clinical clerk before your third year of study is completed. You would lose many of the benefits of these appointments if you held them too early. There is little need to urge your devotion to the study of anatomy and physiology, for neglect of these will never be made good in your after life. In the opinion of some these subjects are now burdened with minute details which overtask the memory of students who have so much to acquire, but these particular studies constitute the basis of all modern medicine and you cannot have too precise a knowledge of them. I will, however, strongly urge you to pay more attention to the subject of botany and materia medica than is now commonly given. These subjects were more carefully studied by your predecessors of 30 and 40 years ago than they are now. A study of botany constitutes an invaluable method of training for medical practice. The present neglect of a careful study of materia medica is likely to lead to undesirable results by destroying the first principles of the art of prescribing with readiness and skill. The prescriptions one meets with to-day are sometimes calculated to bring ridicule upon the prescriber from the counters of the pharmacist, and it is not possible to be a skilful practitioner if you are not well trained in practical pharmacy. In looking forward to the several ordeals of examination which await you you need have no fear of rejection provided, first, that your examiners are not too young and have experience in their duties, and, secondly, that you have honestly tried to acquire your knowledge at first hand and by close contact with the matters in question. Experienced examiners soon discover the difference between knowledge which is acquired and that counterfeit of it which is merely hired for the occasion. The former is your property for life.

I would urge you further to distinguish between the knowledge which is absolutely necessary for your daily work and that other variety of knowledge which, as one of your learned emeritus professors at Leeds aptly defines it, consists in "knowing about." I cannot tell whether Mr. T. Pridgin Teale gathered this idea from a saying of Dr. Johnson, but the latter once remarked: "There are two kinds of knowledge—one which you carry in your head and the other which you know where to find." These are essential and practical parts of your work which must be made your own, worked out and worked in by your hands, your eyes, and your intelligent attention. These go with you everywhere, as a witty American said, "like your fists." There are other subjects which you will study but make less effort to retain detailed knowledge of, because you can at your leisure

[1] "A due proportion of the different faculties of mind is that which is best calculated to make the individual virtuous and happy."—Dr. Currie, Liverpool, 1756–1805.

[2] "The Sons of Glory," Studies in Genius, by Adolpho Padovan (Translated by the Duchess Litta Visconte Arese), Fisher Unwin, London, 1902.

renew familiarity with them, and of such there are many both in science and in medicine. Good examiners will always recognise the relative importance of these two varieties of knowledge and no less the solemn fact that there is a limit to the amount of them that can be acquired in any, even the longest, curriculum.

The tendency of modern medical education is, on the one hand, to multiply details in the earlier and more exact subjects of study, and on the other to provide more abundant and precise clinical knowledge. The former condition is met by abundant demonstrations in the lecture-room and by tutorial teaching, the latter by increased personal opportunities amongst the sick in the wards and out-patient departments. I am not sure if we have not in these days rather too much of what I will venture to call "spoon-food" teaching in the schools. The teachers probably do too much and the students too little. Every subject is reduced by tutors and demonstrators to the most readily assimilable pabulum and laid before the student, who is therefore little left to himself and not given time for meditation and self-instruction. Be advised to take your book and go alone into the museums, try to puzzle out your difficulties, and so teach yourself as far as possible. The five years of study now enjoined are none too many wherein to accomplish all that you have to do, for the curriculum is certainly a full one. And here I will declare that my experience of the modern student of medicine justifies me in the opinion that for steadiness, assiduity, and devotion to his work his like is not too readily to be met with in the ranks of students in any other profession. It is, however, commonly believed by those who have no right to an opinion that the contrary is the case, but I can testify to the general high tone, courtesy, good manners, and tender sympathy which now characterise the medical students of to-day in all the best hospitals, for in all such centres of instruction the teachers and their pupils act, so to say, in public, and the former are bound to teach manners together with medicine and surgery.

I am, indeed, often surprised by the amount of knowledge that the average student contrives to acquire in his curriculum, and this can only be gained by much industry and serious attention. It is now very difficult for medical students to be idle. The grosser temptations that formerly beset them no longer exist, and such as are inevitable appear to afford small seduction save to those who are by nature of the baser sort. Of the latter every good school of medicine speedily rids itself.

It is the commonest of platitudes to assert, in an address of this kind, that you who come here for the first time are on the threshold of a noble profession. We, your seniors, are fully convinced of the fact of the nobility of our profession, and it were well for us, and better, too, for the whole social fabric of the empire, if that fact was more generally recognised than it is. No one who considers the matter with an open mind can believe that the medical profession holds its legitimate place in public estimation. Be the reasons what they may, I believe that estimate to be lower now than was the case half a century ago. While it is certain that the professional knowledge and ability of the great mass of practitioners have increased enormously in recent years, and that the present generation is now better served in all its ills and sufferings than any that has preceded it, that for steadfastness of purpose and dependability of character our profession stands second to none, it must be admitted that its appreciation either by the departments of the State or the public is little adequate to its claims. Greater consideration is, indeed, meted out to members of all other professions. The unselfish efforts of many in our ranks are often regarded with suspicion, and expert opinions offered in good faith are not seldom grudgingly, even if fully, adopted. We are sometimes regarded as members of a sort of trades' union. Some amongst us are utilised at a paltry pittance to swell the profits of various benefit societies. We are taunted and gibbeted as cruel experimenters upon our hospital and other patients, considered unfit to be trusted with the lives of rabbits or guinea-pigs, and yet withal we are very useful when we are needed, but may afterwards be tolerated or perhaps patronised. "*Post morbum, medicus olet*" is doubtless true and likely to be true for all time. Let that pass. Eminence in the arts of medicine and surgery is now hardly ever a passport to the ranks of the Royal Society as once it was. And what may be said of the measure of appreciation of our brethren in the public services of the country? With the issue of the new Army Medical Warrant we heard of sundry "concessions" that had been made to the department. We civilians, who regard military surgeons as at least equal in importance to any fighting unit in the service and absolutely essential to it, know that these so-called concessions were merely corrections of grave imperfections which had long been pointed out but previously ignored. I have watched the outcome of several new warrants for this service and have learned, so far, to have little faith in them. The intentions may be good; the regulations run glibly and promise every assurance, but it has always been possible to read some of them in a contrary sense, and at the will or caprice of any martinet in higher command. We hospital teachers are sometimes rebuked for our want of loyalty if we fail to encourage our pupils to enter the medical service of the army. We regard our duty in this matter as concerned not merely with the status of the military surgeons but with the best interests of the public. If the country sends its soldier sons to war or to unhealthy parts of the empire it is not too much to demand that they shall have the service of the best medical skill that can be secured. We shall be pleased to recommend the Army Medical Service to our pupils when it is so constituted as to carry no particle of social or professional stigma and no disability of any kind with it, and when its members are considered eligible for, and duly receive, the recognition bestowed on officers of other departments. The sister service, to which I once belonged myself, appears to me a happier and more attractive one. Once more, I think it may be regarded as an anomaly that a lay official should be placed at the head of the Registrar-General's department, the duties of which are exclusively technical and medical.

It is not sufficiently realised that our work is for the most part carried on in private life. We have no public platforms, and we, as a body, have always held aloof from the miserable turmoil of politics. No eminent member of our profession in active practice can possibly seek Parliamentary suffrages and no sect or party can claim many of us. When we occasionally make efforts to promote various sanitary or social betterments we are apt to be credited, as a body, with seeking undue power and influence over our fellow-men. The executive authorities usually consider it their duty to check such efforts, or at best are moved to resort to some inadequate compromise.

You may possibly think that, so far, my tone has been somewhat vituperative and perhaps pessimistic, but I have determined to direct attention to some matters which closely concern the profession you have elected to join and are seldom referred to. I should not deal fairly with you were I to promise you a smooth and unchequered path either in your pupillary or your professional life. It is no easy matter to secure the humblest diploma in these days, and the future career of each one of you will demand all your energies and devotion if you are to succeed in winning the confidence of your patients and to earn anything like a worthy reward. Moreover, all your knowledge and skill will not avail you by themselves, for you must add to these the quality of the highest personal character, and, above all, that which I am now about to discuss and impress upon you, the quality of wisdom.

One of the wisest and most distinguished of my predecessors at St. Bartholomew's Hospital, Dr. Peter Mere Latham, in one of his lectures delivered 66 years ago, thus expressed himself on this matter: "With all becoming deference to those who loudly trumpet forth the praises of knowledge and fright the trembling student with a portentous array of the wonderful things he has to learn, I would venture to crave some little regard for what is not so much as named by them, but what is pre-eminently more important than knowledge itself. I mean wisdom as a thing distinct from knowledge but not opposed to it, requiring, indeed, knowledge to work upon, but taking care to proportion that knowledge to the real end which itself (wisdom) has in view. I marvel that this wisdom is not enumerated among the ingredients of the physician's character, since it is conspicuously the chief of all." This, then, is a duty for us, as teachers, so to regulate and to temper your instruction that while you gain knowledge you may increase in wisdom. "It is an old proverb," wrote that greatest of romance writers, Sir Walter Scott, "used by Chaucer and quoted by Elizabeth, ... that the greatest clerks are not the wisest men, ... and it is as true as if the poet had not rhymed it, or the queen reasoned on it."[3]

[3] The Monastery.

Dr. Latham declared that "in its very nature wisdom was too lofty for him to describe," and he preferred to quote a passage from one of Robert Hall's sermons in order to define it. The latter affirmed that "wisdom was to be considered as the top and summit of perfection." Wisdom, then, is not knowledge, though it implies a certain amount of it, especially a knowledge of men and things gained by experience. It is the quality of being wise, and signifies the power of seeing into the real inwardness of things and of forming a correct judgment in any matter which comes under consideration. It is not merely discernment, or discretion, or prudence, though it includes all these. It might be fairly affirmed that a wise man was one who always displayed in his actions strong common-sense. I believe I am right in saying that this is a quality on which Lancastrians and Yorkshiremen are wont to pride themselves and which is generally accorded to them. They are commonly regarded as level-headed men. It cannot be disputed that in a profession which has to deal and come to close quarters with all sorts and conditions of men, to face and to take action on all manner of problems relating to our common humanity in its sorrows and its joys, such a quality as wisdom is a most imperative equipment.

We of all professional men may well pray for "a right judgment in all things." I shall hardly err if I venture on the statement that many of the disputes, failures, and imperfections in our vocation are the offspring of unwisdom. We have sometimes not far to seek for men who are learned and possessed of great mental power who fail to succeed in their calling because they lack wisdom in the use of their attainments. The discipline of our particular studies, and the ready correction which awaits errors of judgment or conception when we encounter the actual facts of nature, either in biology or at the bedside of the sick, might be supposed to furnish us beyond most men with wisdom if not with complete understanding; yet we find that even these experiences sometimes fail to train the faculty of just and accurate discernment, and in consequence we meet with men who in good faith are taken captive by what are termed "systems" of medicine. Although credulity is a plant that grows best on a soil in which there are few, if any, elements of wisdom, we may not regard the sceptic, though often wise, as among the wisest of men. There is, indeed, still much of the unknown in medicine, which is an art based upon many sciences, and he is a wise man who will, as occasion requires, freely acknowledge his ignorance. The declaration of ignorance is the first step on the road to knowledge. The man who sees no difficulties and finds everything explained by his particular theories is an unwise man. Undue credulity in medicine is a serious evil, and it does not grow less, as it should do, with the solid progress in exact knowledge that has been made in recent years. It appears to increase with each decade on the part not only of the ill-informed public but in the ranks of well-educated people.

In this age of monstrous and obtrusive advertisement we know that almost any figment can, with sufficient money and pertinacity behind it, be readily foisted upon a large section of any community. So with absurd projects of investment and with a multiplicity of schisms and cults in religion. Consider, for example, that wicked and blasphemous nonsense which is now enlisting the support of many people in America, and of not a few well-placed persons in this country, so improperly called Christian science or faithhealing. How much wisdom, think you, is concerned in tenets of that kind? Surely, in all these indications of mental feebleness and instability we witness the results of scanty knowledge unbalanced and unchastened by any control derived from wisdom. What are they but conceits and airy delusions which must inevitably go to their doom in failure?

I am strongly of opinion that what we need at this time in the whole field of medicine is what is known as level-headedness and a due sense of proportion as we take our survey of all the problems which are unfolded before us with rapidly increasing activity. Many of us are too apt to adopt the last new thing and to let go the older and well-approved method, to do this carelessly and with impunity. The younger men are keenly set on an equipment of vaunted novelties before they have gained an experience of the older measures which have so well served their masters. Their *vena medica* is unstable. Hence, as I venture to think, the importance of dogmatic teaching in the schools and the infinite value of acquiring definite principles while *in statu pupillari*. Those methods will not fail to prevent mental wavering and caprice in after years, and to steady the judgment in times of difficulty.

The bearing of wisdom on the ethics of our profession is not less important. Hear the words of Robert Hall on this matter: "It belongs to wisdom to determine when to act and when to cease, when to reveal and when to conceal a matter, when to speak and when to keep silence, when to give and when to receive." How constantly you will need to be of an even mind and to balance your judgment amidst the perplexities and temptations which will certainly assail you in the future. How difficult it will sometimes be to do the right thing, to follow the hard line of duty at all costs, to be bold for truth, patient in well-doing, to bear obloquy and carry your head high amidst misrepresentation, to keep an even temper, and to suffer fools (and there are so many of them) gladly. I bid you to think on these things.

Do not neglect in your leisure to study the history of your profession and the lives of the men that have graced and enriched it. One meets with men in our calling who, otherwise well-informed, cannot tell in what periods such men as Boërhaave, Harvey, Morgagni, Sydenham, Glisson, Bright, or Graves lived.

One of the most certain and interesting facts relating to the study of medicine is that it must be perpetual. Your pupilage is the outset of lifelong study. We hear much of what is termed post-graduate instruction, a process which may perhaps be likened to an agricultural top-dressing applied to the soil to raise a full crop from the bare grain sown in the ordinary curriculum. This method was first employed in America and was designed to complete the inadequate course of study, lasting only two years, which was all that was required at one time by many qualifying colleges in that country. I would insist, therefore, on the value of instruction gained, if possible, before you settle in practice in more than one medical centre or locality. It is an advantage to have had a variety of teachers, to see different fields and modes of practice, to come in contact with men whose antecedents and ideas are different from those which characterise one's earlier associates. I would urge you, therefore, in due course to betake yourselves to some other medical centre, to forsake even the wealth of allurements which the Manchester school provides, and to see what is done, and who does it, in other clinics. We find in London that men from the provincial schools are commonly brilliant and assiduous, and prompt in acquiring what they seek. It is also a great advantage to sojourn for a time in one or more of the continental schools and to acquire a working knowledge of the French and German languages. If any of you can be induced to study in the medical school of the Johns Hopkins University in Baltimore you will certainly not spend your time unprofitably.

Regarding the vast progress made in medical knowledge during the last 40 or 50 years it is with strong faith and bright hope that we look forward to the output of this twentieth century in respect of fruitful discovery and therapeutic methods. Many of you will live to see some of these established on sound bases. We whose shadows are lengthening as we follow on to our approaching goal may feel sure that we shall hand on our torches to youths who will carry them high along the road of solid achievement. Your labours in this faculty, together with those of your fellow-students, stimulated by the energy of your professors in other departments, will not fail to add their quota to the general enlightenment of this country. If your university has what may be fairly termed a fuliginous atmosphere for its environment you may not inaptly take for an additional academic motto: "*E fumo dare lucem.*"

Gentlemen, your duty and main interests in the future will relate to the body of man in its ills and sufferings. Your studies here will fit you for a right discernment as to the nature and treatment of disease. Your human sympathy must carry you forward in a spirit of gentlene s and self-effacement. You will minister indiscriminately as priests of the body to men of all creeds and colours, with firmness and decision, as tenderly to the poor as to the rich, carrying hopefulness and brightness with you, and no less an inspiration that shall on occasion stir the very embers of recuperative power in your patients. As I speak now of the duty you will owe to your profession and of the interest in it which you must take, let me once more quote from Dr. Latham's lecture and read to you one of the finest passages in the writings of any English physician. "What," he remarks, "if religion shall animate this interest? Why,

then happy indeed is that man whose mind, whose moral nature, and whose spiritual being, are all harmoniously engaged in the daily business of his life, with whom the same act has become his own happiness, a dispensation of mercy to his fellow-creatures, and a worship of God. Such a man any of you may be." Throughout your career you will be wise if you are of the same mind with Wordsworth when he wrote—

> "In the unreasoning progress of the world
> A wiser spirit is at work for us,
> A better eye than ours."

I welcome all who have come here for the first time and thus open a new chapter in their lives. You will soon find scope for mental activity and I can promise you that with a growing interest in your work you will be spared weariness and discouragement. Be careful from the outset to select only earnest, painstaking, and clean-minded men for your intimate associates. Waste no time in your first session, for no part of your earlier work can be postponed without peril to the remainder. Never permit your work to interfere with appropriate relaxation and exercise in the best air you can reach, for students of medicine more than others require to maintain a high standard of health. Lastly, I will express my belief that a Lancashire youth, furnished with the specific qualities of Lancastrian wits and determination, surely gives token of distinction in any calling that he adopts, and if to his acquirements he adds wisdom, his fame is likely enough to reach some day beyond the limits of his county.

Abstracts
OF
INTRODUCTORY ADDRESSES, ETC.,
DELIVERED AT THE
MEDICAL SCHOOLS
AT THE
Opening of the Session 1902 03.

SHEFFIELD (UNIVERSITY COLLEGE) MEDICAL SCHOOL.

INTRODUCTORY ADDRESS BY SIR H. G. HOWSE, M.S. LOND., F.R.C.S. ENG., PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR HENRY HOWSE said: When your council, through Dr. W. T. Cocking, did me the honour to ask me to deliver the introductory address to your medical school for this session my first impulse was to decline on account of the great difficulty I felt in finding anything to tell you which had not been said hundreds of times before in a far better way than I could possibly do. But I reflected that after all the story of this world was as old as the world itself, that it had been told to countless myriads of our predecessors, and yet that its interest to all of us remained inexhaustible whatever our ages might be. Without hoping, then, to tell you anything new I thought that I might venture to speak to you of some small portion of that story in relation to our profession as it presents itself to my mind.

This is the opening day of your new medical session. First, then, let me congratulate all of you who are to-day entering our profession upon the choice you have made. I do this in no hackneyed sense. I congratulate you because of the nature of the study which it entails upon you—because, in any way to understand your work rightly, you must study the great laws which govern this universe, more especially in relation to the noblest creature upon this earth—viz., man. In other words, the education of a medical practitioner requires a very exact and very wide training in natural science. In developing this proposition I wish to say a few words on the Relation of Medicine to Religion.

We all recognise the terms "revealed" and "natural religion." By the first we mean the law, as it was revealed to Moses amid the lightnings and thunders of Sinai, or in its nobler form, in the great example set us in virtue, in patience, and in suffering in the life of Christ, and His death upon the Cross. I am not one of those who would disturb the faith which believes in this very human form of revelation. Rightly considered, I do not think it in any way inconsistent with the second—i.e., natural religion, by which we mean the study of the great natural scientific laws which govern the universe and which we believe to be the expression of the will of Deity. Still, we must all know that there are many who cannot thus believe. It has been urged against our profession that the training for it leads to the formation of more so-called "atheists" than any other. But this is untrue, if by the term we mean what the derivation of the word implies—people living without God, without a belief in any great all-ruling Power. There are few, if any, atheists in this sense amongst us. It is impossible to study natural phenomena for any length of time without recognising that the great laws upon which they all depend are the expression of some great power, of whose exact nature we know nothing, but whom we call Deity or God. The more perfect a man's scientific training and the more accurate his knowledge, so much the more profound becomes his belief in this all-pervading presence. With the increase of scientific knowledge our human conception of Deity has moved gradually forward. In the historic period, trace the conception of the Sun-God of the Egyptians, of the ancient Persians and Brahmans, and many other nations, and compare it with that of the Christ-God which succeeded it. Nobody can doubt that in the latter we have a much higher conception of Deity than in the former. But have we the highest conception which it is yet possible for the mind of man to take in? Without attempting to answer this question directly I wish to call your attention for an instant to the moral law which most people recognise. It is that contained in the Bible, and it presents a very different aspect if we compare that contained in the Old Testament with that contained in the New. I think that few of us assembled here to-day will be inclined to doubt that the latter presents a much higher development of morality than the former. Still, even the latter, when looked at critically, is found to depend on a mass of tradition and legend, out of which it is so difficult to extract the truth that many are inclined to throw it entirely aside and to believe nothing, while others believe everything, even absurdities and incongruities which are incompatible with the highest form of moral law. But to the scientific man is there no other course possible? Must he either reject wholesale and believe nothing or believe everything and accept things which he knows cannot be true? I think not. The proposition which I wish to put before you is that in the study of natural laws we have the key which unlocks all difficulties. For what is natural law? Looked at from this point of view it is, in fact, the voice of Deity—proclaimed in no uncertain sound, not handed down by tradition or written in books to whose authenticity critics may take exception, but carried out with that exact regularity with which all must live in conformity, if they wish to live at all. My proposition, therefore, is that in the study of natural law everybody is in fact listening to the Divine will, expressed in the only absolutely certain and incontestable manner possible. Consider the evolution of the great law of gravitation, for example; I do not know anything more wonderful in the whole domain of science. From the time when it was used simply to explain the fall of bodies to the earth to the present time, when all the complicated movements of the solar system are seen to be simply an expression of the same great law, all investigation has tended to its development and to its strength. It is, in fact, the governmental expression (if I may use such a phrase) of a great all-ruling power, the might of which we all recognise, but the extent of which none can conceive.

I have used the law of gravitation simply as an instance of a physical law absolutely incontestable and established. It may be said that it does not influence the conduct of life or the moral code. Not directly, it is true, but there are other laws, bearing on ethics, which time and investigation will show are as important in their bearings on life as the law of gravitation on physics. The law of evolution, for instance, is not more than 50 years old, but it is not unreasonable to conclude that lapse of time and increase of investigation will enable it to be formulated with more certainty at some future period than at present, and we may safely assume that the same great principles of investigation and reason will enable us in the future to formulate moral laws in which we shall be able to believe with as absolute certainty as we now believe in the law of gravitation. Is it not fair to believe also that these ethical laws will enable us to judge rules of conduct with as great certainty and with the same accuracy as the law of gravitation enables our wise men to calculate the movements of the heavenly bodies?

Recognising, then, that the whole universe is governed by laws absolutely beyond our control, which we can only study and obey and which it is of equal advantage to all the world to study, for the highest morality must be to make our lives accord with these laws—we cannot fail to admit the superiority of the profession which concerns itself with the study of natural law as it affects the noblest creature on the face of this earth—viz., man.

What, then, are the details of this training to which you are about to subject yourselves? As regards preliminary education I have one remark to make. It may be possible in the future for students to enter the medical profession without any previous training in Latin or Greek. If any future modification of the regulations of the General Medical Council or of the Colleges should render this possible I advise students not to avail themselves of it. It is true that I voted in the long and anxious debates in the senate of the University of London upon this subject in favour of the modification (which, indeed, I think has become absolutely necessary in view of the greatly extended scheme for new faculty examinations in this University—faculties in which a training in Latin and Greek does not seem to be requisite). But in our profession I cannot refrain from expressing my belief that some knowledge of Latin and Greek, if even it be only of a very elementary sort, is of very great advantage to the student.

The study of chemistry and physics involves the study of laws mainly pertaining to dead matter, but they are of the very greatest importance to the student, not merely as an introduction to the later ones, but in order to become acquainted with facts which he will use later in the diagnosis and treatment of disease.

Biology you will study, not in the intricate way which is necessary with the human frame, but partially, especially in botany, with reference to classification. You will find much that will enlighten your mind even in studying the differences between species and genera of very ordinary wild flowers—much that is not contained in books but which will prove of considerable value to you hereafter. All this you can study and pass the examination in before you enter yourself as a student at a medical school, paying the comparatively large fees which the scientific training for the profession now renders necessary. And if you find you can take no interest in any of these subjects there is yet time to retreat and to choose some more congenial occupation. This, indeed, is the "parting of the ways." Let me advise you to consider seriously before you decide. The position of the mere tradesman in the profession, the man who with a minimum of knowledge merely trades on the ignorance and credulity of his patients, is not one to be commended.

The second part of your professional training commences immediately after your entry at a medical school, if you have already succeeded in passing the examination for the first part. This second part consists in the study of anatomy and physiology, and possibly, for some of the university examinations, of a certain amount of organic chemistry and materia medica. Anatomy and physiology must be considered as the most important of all the preliminary professional subjects. In the anatomy you will have to acquire knowledge of a vast number of what appear at first to be mere isolated facts almost impossible to retain in your memory. But it is absolutely necessary that these apparently-isolated facts should be mastered, for a complete knowledge of structure is the foundation upon which your knowledge must be built up. And gradually you will find that these isolated facts associate themselves together in your mind and become comparatively easy of recollection. Not without much labour is this knowledge obtained, nor will it be very efficient or lasting if you attempt to crowd it all within a narrow range of time. The two years allowed by the regulations of most examining boards is the minimum of time in which by daily work the average intellect can acquire this knowledge. Indeed, I would advise you, if you can, to break ground a little into this subject during that first year spent in the preliminary scientific subjects, during your study of zoology, for instance, by doing a little human osteology. You will find it does no harm to your zoological work and will prove of great assistance to you when you actually begin dissecting. In doing your dissections do not cling too blindly to your manual. If you do so you will only train your faculty of observation at second-hand. Remember that one of the objects of all this work is not only the acquisition of the facts, but also the training of your power of personal unaided observation. I admit that you must read to a certain extent, if it is only to acquire a knowledge of the names which other anatomists have applied to the parts you are examining. But in dissecting try to observe for yourselves, and read about the parts afterwards, correlating the points which you have yourself observed with what the book states. In examining a muscle, for instance, ascertain for yourselves its exact points of attachment, what nerve passes into it, and with what other structures it appears to be in contact. By pulling on it you can generally obtain some idea of its action also. In all this dissecting work never think that you are doing it solely for examiners or examinations. You are doing it to make yourselves efficient practitioners in the future—efficient ministers in the service to which you devote your lives. Do not fancy that all this work, this cultivation of your faculty of observation, will be unnecessary for you in the future. In operating upon the dead body, for instance (which must always be a necessary preliminary for operations on the living), I have again and again asked the student to name to me the structures which he has exposed as a help to him in finding what he was seeking, but have been disappointed by finding that he has scarcely any recollection of the structures with which he is dealing.

Closely associated with anatomy is the study of the minute structure of the various tissues and organs which go to make up the body. This, however, is generally included in the physiological course, not because it has much to do with the study of function, but because the use of a high-power microscope is necessary, and this can be better done in a physiological laboratory than in the dissecting-room. This, again, will prove a training for your power of observation and will necessarily tax your previously acquired knowledge of optics. The correct interpretation of what you see under the microscope is not by any means a thing which comes intuitively, but it requires considerable practice and thought. In these classes the value of a previous training in physical science is shown by the comparative ease with which men who have had a good training in physics master the details of practical microscopy. In acquiring your knowledge of physiology, on the other hand, you must as a student trust more to what the teacher can show you than what you can do yourself unaided. Certain things no doubt every student can do without offending the most censorious criticism. But the demonstration of the more complicated phenomena of function can only be carried out by a highly trained teacher and demonstrated in an advanced physiology class. For this reason I have never regarded physiology as a subject for a student equal to anatomy and histology in the training of personal observation. It, however, deals with normal or healthy life and thus introduces the student to the very complex problems which he has to solve whenever the phenomena of life are in question.

In the third portion of his training the student is introduced to the study of the more purely professional subjects—viz., medicine, surgery, and midwifery. It is in these that he begins to deal with "patients"—i.e., with the phenomena of life in disease. And it is here that he gains insight into some of the great problems which the study of health and disease implies. I need scarcely say much to you about the work of these last two or three years. It is done in the wards and in the out-patient department—at first as clerks to the physicians and surgeons, reporting in the case-books all the daily symptoms of the patients, and the treatment which they undergo; and secondly, as dressers to the surgeons or as clinical assistants to the physicians (the names of the appointments vary in the different hospitals, though the work is practically the same). And then some few of you will be appointed house physicians, house surgeons, and resident accoucheurs. Here you will have your first responsibility in the actual treatment of patients thrust upon you. Here you will first begin to appreciate the immense variety of the phases of health and disease and the boundless sea of questions yet undetermined, as yet not even investigated, which remain for you to solve in order to help the world on in its progress in the future. There is a striking difference between the point of view from which a student looks at a case and that from which a trained practitioner regards it. To take a case of hip disease, for example. The student tends to think that if a patient is suffering from morbus coxæ every case must take a very similar course and present similar symptoms, as so precisely defined in his text-books, and he asks of someone who, he thinks, knows better than himself, "In what stage is the case?" And suppose

he gets the reply, "The second stage." Then he reckons up the various signs that his books have told him are present in this stage and on examining the patient he is often disappointed on finding that some of them are absent. Why do cases of the same disease vary so wonderfully *inter se*? It is because the number of factors in the living body are so numerous and so complex.

[Sir Henry Howse here alluded briefly to vaccination and the serum treatment of disease. He continued:]

Between the laws controlling disease and the moral law there is a very close connexion which has been recognised from very remote times. The doctrine that what we suffer in this life is directly due to our actions—is a punishment inflicted upon us for some fault—is a very old one. We recognise it again and again in the Bible, especially in the Old Testament. It is the basis (mainly) on which all our legal system of government in this country and elsewhere is founded. It is deeply ingrained into the religious nature of our people. How often do we in the profession hear remarks such as this—which was said to me of a patient suffering from cancer: "My poor husband, he was a good Christian, a good husband, a good father to his children. What has he done that he should be so afflicted?" The reply could only be, "Nothing consciously." For we are still so ignorant of the etiology of cancer that we cannot connect it in the great majority of cases with faults in living. But is there no foundation for this belief so widely spread about? With the knowledge which we all possess that disease does undoubtedly follow errors of life as a direct consequence of these errors, who shall say that even cancer or consumption may not be in the future preventable by a closer study of, and a life spent more in conformity with, the laws of health, as we shall hope to learn them in the future? The laws of health, then, are in close relation to the moral law, so close that a violation of the one constitutes an offence against the other.

Perhaps you will ask me here, Where are these moral laws, in conformity with which we must all live, formulated? I reply that they are yet unformulated or only very imperfectly so, but that as far as we know their highest exposition at present existing is in the Christian law. What can be finer, for example, as an ethical law regulating our conduct to each other than the Christian injunction, "Do unto others as you would be done unto"? Because the perfect ethical law has not yet been formulated, do you believe that it does not exist? Did the Arabian shepherds, the first observers upon whose work the science of astronomy was founded, though entirely ignorant of the formulation of the law of gravitation, as it was afterwards enunciated by Kepler and Newton, did they the less know that if they threw a stone up into the air it would fall to the earth again, or that if they threw themselves from a precipice they would be dashed to pieces at the bottom and die and not live? Did they then the less live in conformity with the great law of gravitation because they were ignorant of its formulation, and because they themselves invented strange theories to account for the movements of the heavenly bodies? Do you, then, the less believe in the existence of great natural ethical laws, which should regulate our conduct and life, although we may find them imperfectly formulated at present? Do we not know that in abundant instances the moral natural law and the Christian law are in absolute conformity? Do we not all recognise that the drunkard, the glutton, the thief, or the man who gives way to unbridled passion, will certainly suffer for his *laches*. We believe, then, in the existence of this moral natural law, though imperfectly formulated at present, and we think that we have a test of the correctness or imperfection of the present formulation by its agreement or the reverse with the great natural laws which govern the universe.

UNIVERSITY COLLEGE HOSPITAL.

INTRODUCTORY ADDRESS BY PERCY FLEMMING, M.D. LOND., F.R.C.S. ENG., ASSISTANT OPHTHALMIC SURGEON TO THE HOSPITAL.

MR. FLEMMING commenced his address by stating that in his own opinion the time had come when the delivery of an introductory session address might well be allowed to drop. He admitted, however, that the occasion did possess one pleasant function since it afforded an opportunity, of which he gladly availed himself, of according to all newcomers a hearty welcome to University College. In bygone days when there was no regular medical curriculum there was no doubt a necessity for an address which told the student at the outset of his studies what he was expected to do and how he was expected to do it, but to-day the student was hedged in by rules and regulations, and so he thought that it would be not altogether unprofitable if he were to say a few words in consideration of the various classes which constitute the medical course of University College. Mr. Flemming thereupon entered into the question of the value of attending systematic lectures and the qualities which go to make a lecture attractive. First of all the lecturer must know his subject. Secondly, the lecture must possess the quality of freshness. He quoted a remark made by John Hunter who, when Astley Cooper asked him whether he had not, the year before, stated an opinion on some point directly at variance with the one he had just put forth, answered, "Very likely I did, I hope I grow wiser every year." Mr. Flemming next referred to the practical classes, referring specially to those in anatomy and physiology. He then passed on to consider the organised teaching at the hospital—viz., the clinical lectures and demonstrations and the work in the clinical laboratory and post-mortem room. He continued as follows:—

If I, speaking as I do in the presence of so many distinguished clinical teachers, may without presumption give my opinion as to the essential factor in clinical teaching I should say that the one thing a student wants to take away from a clinical lecture is a mental picture of the actual patient about whom the lecture has been given, with the methods used to elucidate various facts connected with the illness or injury, and the process of reasoning that has step by step led to the final conclusions. A certain number of so-called clinical lectures appear to me to be really systematic lectures given at the bedside, with nothing more than a passing reference, if even that, to the particular patient. And this leads me to speak of the work done in our new clinical laboratory at the hospital. However valuable and however necessary this work may be, it has this disadvantage that the investigations are of necessity carried on apart from and without any necessary connexion with the patient. For example, the clerk in the laboratory under the direction of our able pathologist makes an exhaustive analysis of the urine, stains films, makes cultivations and blood counts, and writes the reports of the results of his several investigations. Now, if the student's work end there I think a great deal of useful training is lost, the clerk in the pathological department should make it his business to associate any particular laboratory report with the patient whom it may concern. And conversely the clerk in charge of a case should master the details of the pathologist's report on that case, and not merely copy it out. If this be neglected and the work merely be laboratory work it will not confer much benefit on the student, or indeed on anyone. On the other hand, it is impossible to over-estimate the value of the work in the clinical laboratory both to the student and to medicine generally if pains be taken to associate the investigations there with the actual patient in the wards; the dry abstract details of the report will become real, vital, and living if they be associated in one's mind with a particular patient occupying a particular bed, having this or that characteristic appearance, and presenting certain special symptoms. And the same remarks apply, of course, to post-mortem examinations. It is a great gain in one sense that these examinations should be conducted thoroughly and systematically by the pathologist, but much will be lost if the symptoms presented by the patient during life be not elucidated and explained by the post-mortem findings at the time of the examination by one who has had care of the patient during life.

Well, gentlemen, the outcome of these remarks on the clinical teaching is that, valuable and necessary guides as are the clinical lectures given at the hospital, yet above everything strive all you can to become your own clinical teachers. Study the cases that come before you thoroughly; a few cases well studied are of more value than many superficially looked at, for, after all, what you need is a trained observation and a thorough grasp of methods and the ability to weigh the value of facts; and the man who has trained himself to observe and to examine methodically and systematically is well equipped to investigate any case that may come before him, even if he has not seen a similar one previously, as such is sure sooner or later to be the case.

In my student days it was fashionable to take clinical

notes of cases for one's own private use and records. I rather think that this custom has largely died out. Kept within proper limits I think such notes are most valuable, made as they are when the mind is fresh and eager in pursuit of new experiences. And certainly the notes of those days have an abiding interest, one finds oneself instinctively associating and comparing cases of to-day with those early ones whose record is so vivid. This habit of note-taking may easily be carried to excess; notes as notes have no value. The true test, I think, to apply if one is considering the desirability or not of keeping notes of any particular case is to ask, "Have I learned anything from it?" If "yes" be the answer then the case *is* worthy of recording, and never forget to add to the notes the particular point or points that you have learned from the case. Do not trust to memory for the latter. Record what you have learned at the time. Without this the notes will not have much value. On the other hand, notes taken in this way will, I believe, furnish you with a most valuable possession, valuable because the knowledge gained by your own labour becomes part and parcel of yourself and will grow and develop with you. And similarly I would say endeavour at the end of each hospital visit to consider what you have seen and learned and do not hurry from one thing to another. And in this connexion let me draw the attention of all new students to the medical society and let me urge you all to join it. Amongst other useful functions it serves the purpose of affording opportunity of meeting together to discuss cases and specimens and to interchange ideas about them.

Lastly, gentlemen, in our review of the various classes of the curriculum we come to the tutorial or revision classes. The number of these classes that are held to-day is largely in excess of that of 20 years ago. It is obvious that there must be a demand for such classes, for they would not be provided for the amusement of the teacher. What is the reason for this demand? Partly, I suppose, because after all it is the student's business to get qualified, and he feels that these classes help him to attain that object; partly, too, I expect, because the subjects of examination have increased in scope and detail, if not in number. Now, I think the value of these classes depends entirely on the use made of them both by the teacher and the student. If they be regarded by the student as substitutes for his own reading, thinking, study, and observation, they can only be harmful. Facts accumulated in this way may enable a student to pass an examination but will not equip him to investigate and to deal with actual cases. On the other hand, I think these classes may be a great and real help. For one thing they bring the teacher and student into more direct personal contact, and the personal factor in teaching counts for much; individual difficulties may be met and answered, and encouragement given and thought stimulated, and it is a great gain for the teacher to be able to ascertain by examination whether his explanations have been followed and grasped. And if used as real revision classes they serve the obviously useful purpose of filling up gaps in one's knowledge. Speaking, then, for myself, I think that these classes conducted in this spirit have a useful function, but undoubtedly they become harmful if from the exigencies of time attendance at them takes students away from practical clinical work in the wards or out-patient rooms.

This completes the review of the various classes which you will be called upon to attend whilst you study here; and as I began this address with congratulating those of you who are just embarking on your course, so now I should like to say a few words to those of you who, having completed the curriculum, will be leaving the college in the course of the year. We wish you all success in your future work. I think you will find that the most valuable lessons you have learned here—professional lessons I mean—will be the acquirement of habits of accurate observation and the mastery of the various methods of investigation. Trained observation and method, and ability to weigh the force of evidence, not mere success in examinations, will see you through many difficulties. You will find, perhaps to your disappointment, that patients will not be ill according to the type described in the book or lecture. Many cases will require much thought for their elucidation. To be successful you must carry on your practice in a true scientific spirit, the spirit, that is, which is ever seeking the truth, which is always ready fearlessly to speak the truth, though be it remembered this need not be done in a brutal manner. And, gentlemen, you must be prepared to suffer for the truth, and, as Turgot well said, in every-day practice it is so very easy to become indolent in investigation and the slave of routine; it is "indolence, obstinacy, and the spirit of routine" that oppose the progress of truth. If you carry on your work in this way you will have your reward—a reward of course far different and of far greater worth than that gained by letting yourself be the "mouthpiece of the passing beliefs of the popular mind." This may give you popularity, it will give you nothing more substantial.

From time to time letters are written to the medical papers upbraiding the unfortunate authors of these introductory addresses for not warning students and their friends of the hard lot of the general practitioner and the small remuneration he can earn and ridiculing such an ideal as I have put before you. All I can say with reference to such comments is that if your sole object in entering the medical profession is to make money then you have made a great mistake in joining it. I quite realise that the object you have in mind in becoming students here is to gain the knowledge that will qualify you to earn your living—and any man with ordinary industry who has completed the medical course can always do this—and, as was pointed out last year by Dr. Risien Russell in his introductory lecture, the present time is a very favourable one from this point of view. But if this be the end-all, if there be no love of knowledge for its own sake, then the prospect is, I think, a not very happy one. If your work be carried on in a scientific spirit, then whatever its nature it will give you pleasure and a very real happiness. And if I am told that the difficulties of carrying on the work of a practice in this way are too great my reply is that there is no greater pleasure than that experienced in the overcoming of difficulties. And that I may not be considered altogether unpractical may I venture to tell you what I believe you will find to be the three chief things that the public look for in a medical man: first, *decision*—we must be prepared to decide what is the best to be done at the moment, even if the case is not clear to us in all its aspects; secondly, the ability to give what we call a *prognosis*—i.e., to be able to state whether the illness or injury is going to be fatal, and if not how long it will be before the patient is well; and, lastly, *sympathy*—not a false sentimental sympathy that pampers weaknesses and which undoubtedly pleases some, but an honest endeavour to look at things from the patient's point of view.

It is impossible for me to close this brief address without some reference to the University of London. Most of you know that after much travail and labour a new University of London was born a year or two ago. The period of infancy is always a precarious time and this particular infant is watched and tended by many experts. Of course, the prime difficulty in all such cases is the feeding. And the food that is needed for this infant University is money; unless money be forthcoming this new University may live, but it will not thrive. Now it has occurred to some that it might assist matters if some of this food be given, as it were, in a predigested form. And so it comes about that instead of actual money this college with its equipment has been offered to the new University of London. But the infant's attendants consider that the entire college may possibly be too much for, and might injuriously affect, the constitution of the new University. And the particular part of the college that in their opinion would so disagree is that part which you and I are most interested in—viz., the faculty of medicine. Negotiations are going on and nothing definite is known about them at present, but from time to time rumours appear in the medical papers about the future of the medical faculty of University College. If the faculty of medicine should cease to exist what will be the position of our school? If we have lost our connexion with the college what shall we possess? In the first place we shall have the hospital, the latest and newest and therefore the best equipped hospital of the largest city in the world. And all new students should know that we owe this hospital to the generosity of one man, Sir Blundell Maple. Then next we should not go from here empty; we should not leave until we had fresh buildings near by and these buildings being new would be better planned and designed for modern scientific work than those within these walls. And lastly, gentlemen, we should take with us our traditions. And for a school which can boast of names such as Cooper, Liston, Marshall, Quain, Wilson Fox, Marcus Beck, and again of

Jenner, Walsh, Hare, Russell Reynolds, not to mention those who though not on the active staff are working and with us still, this is no empty possession. So whatever be the future of University College our medical school will continue to exist, and if it is to flourish we must not be content to live on the reputation of those who have worked here before. They in their day and by their work have made University College Hospital famous, we in our day must see to it that that fame does not become tarnished or grow less. And this duty belongs not only to those of us who remain working here, but to all those who, having received their education here, have gone forth into all parts of the country and empire carrying with them some of the traditions, some of the spirit of the place. It will be

"Enough if something from our hands have power
To live and work and serve the future hour."

MIDDLESEX HOSPITAL.

INTRODUCTORY ADDRESS BY STEPHEN PAGET, M.A. OXON., F.R.C.S. ENG., SURGEON TO THE THROAT AND EAR DEPARTMENT AT THE HOSPITAL.

MR. PAGET began by congratulating the new students on their choice of their school, for it would be hard to find anywhere better opportunities for working, or a higher standard of teaching, or more constant help and encouragement. During the last few years an immense amount of time and of money had been spent on the school buildings and they were now almost perfect—well-arranged, well-furnished, and comfortable and healthy to work in; and these material advantages were a very small thing compared to the steady excellence of the teaching and the incessant care that was given to the advancement of every department of the school. "Best of all," he said, "we work well together; the complex processes of the administration of this great hospital go smoothly, and we are 'as a city that is at unity in itself.' The new students will find everywhere kindness and goodwill, practical help and good example; there is no hospital in the world where a man gets more happiness out of his work or makes better friendships or learns his business more thoroughly. We might even say that there is no hospital where it is less hard for a man to become what we call 'good all round,' finding the right way in all things and sticking to it till the hateful time comes when he must say good-bye to this pleasant place." Mr. Paget went on to compare hospital life and university life. The hospital buildings might look plain and common-place to strangers but they had a charm of their own; certainly it would be impossible to find in Cambridge or Oxford any modern bit of building more beautiful than the chapel of the Middlesex Hospital. The hospital garden in summer, when the patients were under the trees and the students were playing tennis, would bear comparison with the empty and useless gardens of the universities all through the long vacation. "Our hospital," he said, "deserves better than any university the name of *alma mater*, for her motherly kindness is not limited to her own sons and daughters, but is extended every year to 4000 in patients and 49,000 out-patients. Surely we score here; nobody can call us narrow or selfish or exclusive. Imagine a college at Cambridge or Oxford dispensing culture as we dispense drugs to a daily crowd of unfortunate people who wanted culture; imagine the trivial cases being sent away with culture enough for a week and the serious cases being treated as in-patients till they were sufficiently cultured to be discharged. This sort of university extension is unimaginable; the academic life cannot diffuse itself; we are the one profession whose students are actively and constantly employed in doing good to other people. By this sort of life you learn, as nothing else could teach you, to understand your fellow-creatures. You get a fair insight into social problems; you do not have to go to Toynbee Hall, or any such place, to see how the over-population of London lives, and how drink and preventable diseases, and the sweating system, and immigrant aliens, and dangerous trades, thin their ranks. The proper study of mankind is man; for us that branch of learning is practically a compulsory subject; for undergraduates it is more or less optional." As for the curriculum or studies, nobody could say that it was illiberal, for it was colossal; it would be hard to find a wider or wiser plan of work at Cambridge or Oxford, or, having found it, to find many students there able to live up to it. Hospital life just at first might not seem pleasant, "but," continued Mr. Paget, "we soon get a hold on our work, and then we begin to enjoy our life here, and each year seems pleasanter than the last. It is, indeed, a dismal affair when the time comes that we must leave the hospital. We have made so many friends and have befriended such a multitude of patients; we have accumulated such an amazing quantity of facts and so many strange experiences. We have had the pleasure of working with the nursing staff of the hospital which is a privilege hardly to be realised at the universities. Our fellow-creatures have been our books; we have studied them in a straightforward non-academical way, without affectation and without embarrassment. Athletics and the medical society and the musical society have helped us to enjoy ourselves and, above all, we have had the delightful sense of membership, or unity, or community, or whatever English word you like to use instead of the phrase *esprit de corps*." Hospital life was not only a curriculum or such things as could be marked in examination; it was the whole man, all through his most impressionable years, under all the good influences of the place. It determined a man's life in practice, not by settling for him the exact line of practice that he should follow, but by making him a good all-round student who would be a good all-round medical man whatever sort of practice he might invest his life in. There were three ways by which a student might increase the value of his life against this day of investment. He ought to master one special subject in addition to his general work; he ought to set himself to obtain, even at the sacrifice of time and money, a resident appointment; and he ought to read hard outside his compulsory books. "Read, above all, as Middlesex men, enough to understand something of the work that is now being done here and elsewhere on the pathology of cancer. You are proud of your hospital now; try to think how you will feel when some part of the burden of that disease is at last lifted off the world by the help of our own men here."

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

INTRODUCTORY ADDRESS BY CHARLES BURT, J.P., TREASURER AND CHAIRMAN OF THE HOSPITAL.

MR. BURT commenced his address by referring to the advances made of late years in the position of women as regards professional and public work. He continued:—

Do not think the lowest part of the divine art of healing beneath your attention. How can you tell whether your patient is well nursed and cared for if you do not know how to do the work yourself? Every eminent medical man admits that effective and appropriate nursing is half—perhaps more than half—the battle with disease. Set up for yourself a high standard and keep it up. Your standard must not be one for professional knowledge only; a physician must have a high character, not merely for skill, but for moral, social, and intellectual attributes. These things tell materially in the race. Medical women should be the brightest, purest, and most gracious of their sex. And they must not fail to be gentle and sympathetic. You will need firm nerves and steady hands, but I pray you strive against any hardening of your hearts and listen with tender attention to the tale of pains and troubles of your patients and strive to cheer and to comfort the hearts of the suffering ones. They may be bad or good-for-nothing persons, but you will treat them gently and kindly all the same. Do not as students be too ready to take or to make confidantes. Keep your own and other people's affairs to yourselves. Secrets ought to be kept secret and private matters coming to your knowledge in your profession must never be disclosed—not to your dearest friend—who is ready to swear solemn oaths of secrecy and may let out the story the next day. You know the colour in which secrets should be kept—in *violet*. ..... Do not think lightly of the minor virtues, such as punctuality, good temper, patience, and courtesy to those about you. It may impress the first of these on your memory if I tell you a little story—a true one. Sir George ——, an admiral in the British Navy, now dead, told me that when he was married he went with his bride to a country village and on the first Sunday morning he arranged with her to be ready for church at a quarter to 11 at the house door. He was there at the time appointed; the lady was not. So off he went to church without her and took his seat, after saying the usual short prayer inside his hat. The bride came

to the appointed place a few minutes after time and had to pursue her solitary way to the church, where she found another seat. They did not meet until the service was over. Sir George did not tell me exactly what passed when they did meet, but remarked, "I thought we had better begin as we meant to go on." Ladies will please note that it was the second wife. Take your reasonable part in the amusements and athletics of the school—they will do you good; but please do not take to cigarettes either in or out of bounds—leave tobacco to the other men. I am glad that the religious side is not omitted from the school life and work. There is nothing which so exalts and ennobles the character of man or a woman as a sincere and humble Christian life, and I am convinced that, whatever his or her denomination or theological opinion may be, such a one will be found the most reliable and estimable in daily duty and conduct and the happiest in life and death. Keep your Sundays as far as possible for days of actual rest and worship. I have found them of inestimable value in the grind of 40 years' hard and exhausting work. You will lose nothing, but gain much, by the seeming sacrifice which is a real blessing never to be neglected or abused. Of the rewards you may look for—I once heard one of His Majesty's judges condole with the students at St. Bartholomew's Hospital on the paucity of prizes in the medical profession as compared with the legal. If you think only of public honours and official renown and rewards and salaries of course his lordship was right, but I venture to say to the students here that these are not everything, and that whilst very few doctors attain a great position in the public eye, and perhaps still fewer amass great fortunes, there is a fair prospect to the diligent and well-instructed medical practitioner of earning a competent income and there are still honours and rewards for exceptionally able men and women also. Any way, the work they do, the ills they cure, and the lives they save are of greater worth and more to be desired than the titles and big salaries of His Majesty's judges and leading counsel at the Bar, and to the community they are of far greater value.

> "A wise physician, skilled our wounds to heal,
> Is more than armies to the public weal."

Now a few words to the advanced students who will presently be ready for the practice of their profession. Some—I hope many—of you will be appointed to infirmaries and hospitals and other institutions where your services will be appreciated by hundreds of sick and suffering ones. Some will go into private practice—many, I hope, to India and China and the colonies. There is surely no such Christ-like work as that of the medical missionary, in which women have so great advantages over the mere man, and in which we all shall heartily wish you God-speed. Wherever you go you will be servants of humanity. Ladies, do that service with your best.

Mr. Burt concluded his address by advising his hearers to make themselves familiar with the law as affecting their work.

THE MEDICAL TREATMENT OF APPENDICITIS, WITH NOTES OF THREE ILLUSTRATIVE CASES.

By JAMES BURNET, M.A., M.B., M.R.C.P. EDIN.,
FORMERLY RESIDENT PHYSICIAN, ROYAL INFIRMARY, EDINBURGH.

THE subject of appendicitis is one which has recently awakened fresh interest amongst members of the profession and the question of nomenclature has once more been raised. Whether we are to regard such cases as perityphlitic in origin is not a matter to which we should give too much heed. Surgeons, I think, have proved beyond a doubt that the majority of cases formerly set down as instances of perityphlitis are in reality the outcome of an inflammatory condition of the appendix vermiformis. Nor are we now concerned with the etiology and morbid anatomy of the disease, interesting and instructive as these may be, I would only remark in passing that I believe we have in gout and rheumatism predisposing causal conditions in many cases. It is with the treatment of appendicitis that we are more particularly concerned at present. Knowing as we do the serious risks which a patient attacked by this disease runs it behoves us to have a very clear and accurate idea of how we are to deal with such cases when they arise in practice. No one, I think, will be found to deny that he is often at a loss to know how to act in a case of appendicitis. Of course, we are all aware that often enough the attack is a mild one, never during its course giving rise to any grave symptoms; but, again, there are cases of greater severity where we hesitate, and while we hesitate the patient slowly slips out of safety into danger. If we appeal to the surgeon we are told to operate in every case that does not show signs of improvement within 48 hours or at most three days. We thus have a better chance afforded us of saving life, and operation at an early stage in the disease is practically devoid of all risk. Now, I grant that this may be true in hospital practice, but in private practice the conditions are somewhat different. Moreover, in private practice the patient and his friends are more likely to oppose operation. How are we to act in such a case? We look in text-books on medicine and surgery in vain for help beyond the commonplace suggestion that operation should be performed in cases that do not seem to be improving. The medical treatment of appendicitis is of more importance than, as a rule, is attached to it. Osler says "there is no medicinal treatment of appendicitis." There is certainly no specific remedy which can be given with the assurance that it will cure the disease. Treatment, therefore, resolves itself into the employment of a *method* of dealing with the case. Here the exercise of our judgment and the careful consideration of every fresh development as it arises are constantly required. We must ever be on the look-out lest complications supervene, now watching the patient's pulse and temperature, now marking the degree of physical strength, now estimating the amount of pain and carefully examining the *locus morbi*.

Pain is the first symptom that demands our attention. It may be felt in the right iliac fossa, over the abdomen as a whole, or in the lumbar region posteriorly, which may make us very apt to suspect kidney mischief. The character of the pain may be dull, but it often assumes the form of colic. No matter what the site or the character the pain of appendicitis is best relieved by means of local applications. Personally I have the greatest confidence in turpentine fomentations kept constantly applied, a fresh one being substituted as soon as the former one cools. If applied at odd intervals they are worse than useless, as then they serve to increase the feeling of discomfort by first torturing the patient and then chilling him. To be of any service they must be constantly renewed. The applications must be continued until the pain is very materially relieved, which will usually be the case within 48 hours. Afterwards an occasional turpentine fomentation may be applied to relieve the "stinging" pain which most patients complain of during the earlier days of the disease, even after the intense pain has disappeared. When occasional use is made of these fomentations it is well to apply a sheet of cotton-wool afterwards, otherwise the patient is apt to experience an uncomfortably chilly sensation. Some practitioners employ carbolic fomentations, but on the whole turpentine is safer, especially in the hands of an untrained nurse. The application of ice has its advocates, but it has certain disadvantages. Ice may so lower the sensibility of the part that even on palpation no pain is complained of, while all the time the diseased process is going on. Again, ice tends, if long continued, to lower the vitality of the part to which it is applied, and as we are here dealing with delicate tissues, easily killed and very readily rendered gangrenous, its use should for this reason alone be avoided. Apart from these objections the patient's personal comfort demands our consideration, and as a rule heat is more soothing than cold in cases of appendicitis.

Blisters are seldom employed nowadays, and indeed there is nothing to be said in their favour; nor does the application of iodine seem to me to be commendable. The use of poultices is most objectionable. Their only action is to weaken still further the patient, and neither here nor in pneumonia have I seen any real advantage obtained from their employment. Some writers tell us that their use is indicated when an abscess is forming, but surely no one can believe that the patient's life in such cases could be freed from danger by the application of a poultice or two.

Most physicians, I find, advise the use of morphia in cases of appendicitis, the amount given being such only as will ease the pain without causing somnolence. For my own part I do not regard this as altogether scientific treatment.

The giving of morphia even in small doses very often deranges digestion; moreover, it is apt to interfere with the pulse-rate. Another objection to its use is that we can never tell to what extent it will influence any particular patient, as no two persons are exactly alike in their tolerance of this remedy. Further, surgeons condemn it, so that in appendicitis, where surgical skill may be required at any moment, it is well to abstain from giving it lest the surgeon find fault with the physician for his treatment of the case.

Sickness and vomiting form troublesome symptoms in some cases, but as a rule they rarely persist beyond the first two days, except in grave cases that develop peritonitis. Ice given at frequent intervals or iced potash water in small quantities will often aid in alleviating these gastric phenomena. On the whole, however, much may be done by careful feeding, giving only such food as requires no effort to digest and giving it in small quantities at regular intervals. Vomiting, too, may often be kept in check or prevented almost entirely by giving 15-minim, or even 20-minim, doses of liquid extract of cascara every six hours until 45 or 60 minims have been taken altogether. If thought expedient, five minims of the tincture of belladonna may be added to each dose. Small doses of cascara act as a stomachic and seem (it may be for this reason) to act as a preventive against nausea and vomiting. Such doses, moreover, do not act with any great severity on the bowel, and hence their use is perfectly safe if given with care at the very outset of the case.

Frequent micturition is a distressing symptom which most ordinary text-books pass over in silence, but it is one demanding our attention, as anything that we can do to alleviate it will not only merit the confidence of the patient and his friends, but will also enable him to obtain more rest. In such cases I have found the tincture of hyoscyamus in 30-minim doses helpful. It not only controls the frequency of micturition but also alleviates the discomfort which is so often attendant upon the act. This symptom is not, as a rule, a marked one after the third or fourth day of the disease, but it must not be neglected from the point of view of treatment. Headache, too, will usually be complained of, and sometimes it is very severe. The patient will complain of a burning and throbbing sensation which has a tendency to become aggravated as day passes into night. For this symptom probably some such remedy as phenacetin will suggest itself, but in practice I have found nothing give so much relief as an ice-bag applied to the head, care being taken to renew the ice from time to time. This symptom may seem a small matter to the medical attendant, but after the abdominal pain the throbbing headache is of the greatest import to the patient himself.

The feeding of the patient is a matter to which it is impossible to give too much attention. His digestive organs are feeble, he has some degree of fever, and we wish to maintain his strength without taxing his digestive powers. An invalid feeding-cup should in all cases be made use of, as on no account must the patient be moved from the recumbent posture. Personally I order a teaspoonful of beef jelly every two hours alternately with a teaspoonful of whisky at the same intervals, bearing in mind that the latter is a food as well as a stimulant. Milk and potash water or milk and barley water should be given in addition. Beyond these articles of diet nothing more is required. In fact, the less we give the better, and this quantity of nourishment not only satifies the patient but serves to sustain him sufficiently. If more is given sickness and even vomiting are apt to result, and much unrest and distress are thereby occasioned. The friends are apt to imagine that the patient is being starved, but a little firmness on our part will usually prevent their giving more than has been ordered. Thirst is best overcome by sips of hot water or by giving ice to suck. What we have to guard against in the feeding of the patient is not only the production of sickness, but also of flatulence. The giving of too much milk or of milk undiluted is very liable to occasion distress, if not actual pain, from flatulent distension of the stomach and intestines. I think that practitioners are apt to forget this in their anxiety to nourish the patient, and so I mention it as an error carefully to be avoided. Even after the pulse and temperature are normal it is well to proceed very slowly and cautiously up the dietary staircase, beginning with arrowroot or sago gruel, and passing on to chicken soup by slow and easy stages to fish and chicken and mutton. The condition of the tongue and the desire of the patient, but more especially the former, will serve as guides to us as to the rate of progress at which we may advance in feeding our patient. After the first few days, and when the abdominal distress has become very slight, we can do a great deal to rest the inflamed part by applying a large pad of absorbent cotton wool held in position by a broad (say a four-inch) domette bandage. The patient should be told to lie as still as possible, preferably in the dorsal position, and certainly not on the left side, as this would cause dragging upon the appendix. Attention to these details will do much to hasten recovery, if not in many cases to prevent complications with the dread of having to undergo operation. I shall now illustrate the value of the treatment which I have suggested by quoting notes of three cases that quite recently have been under my care.

CASE 1.—A man, aged 31 years, was seen for the first time about a month before the attack. He was then complaining of giddiness and told me that he had been drinking heavily of late, but had not tasted any alcohol for some days. He had been suddenly seized the day before with an attack of vertigo and had fallen down while going to work. He was very weak when I first saw him and his tongue was foul and tremulous. His heart was acting feebly and somewhat irregularly. He had no abdominal pain. He improved under tonic treatment and rest in bed, and I ceased attending him. About a month later I was asked to see him one evening. He said that he felt faint on getting up that morning, and when I saw him he was lying in bed trembling all over and complained of feeling very cold and chilly. His temperature was 104·2° F. He had no pain in the chest or abdomen, and I was at a loss to account for his symptoms, but suspected a possible latent pneumonia. Next day, however, he felt much better and both the pulse and temperature were practically normal. Two days later I found on my morning visit that my patient had passed a very bad night. He had been sick and had vomited a great deal, any attempt at the ingestion of food almost immediately leading to its rejection. He had now distinct abdominal pain, especially about the umbilical region. The temperature was 101·6° and the pulse was 108. I ordered him to have only iced milk and potash and gave him a mixture of bismuth and hydrocyanic acid. In the evening his temperature had fallen to 101° and his pulse was now 100. He had been somewhat restless during the day, but the sickness was less marked and he retained the milk and potash. Next morning he said that he felt nearly all right again, the sickness had entirely gone, and his temperature was 98°. His pulse, however, was 84, a fact which struck me as of some importance. I made a careful examination of the chest and abdomen once more but could obtain nothing characteristic. In the afternoon I was sent for as the vomiting had returned with increased severity and the patient now complained of intense pain in the right iliac fossa. The temperature had risen to 102° and the pulse was 104. The diagnosis was now clear. I had no doubt that I was dealing (and had been all along) with a case of appendicitis. Turpentine fomentations were at once ordered and 20 minims of cascara every six hours. In the evening the temperature had risen to 102·6° and the pulse-rate to 108. The pain was easier and the sickness was less. At 11 P.M. the temperature was 102·4° and the pulse was 104. The pain was almost gone, but I could make out a distinct mass occupying the right iliac fossa. Next morning the temperature was 101° and the pulse was 120. He had some pain, but did not feel at all sick. He was now getting beef jelly and whisky only. Though the temperature was satisfactory I did not like so rapid a pulse; still, I was unable to detect any change in the local condition. The patient remained much the same all day and he said that he felt very ill and weak. At 10 P.M. his temperature was 101·2° and the pulse-rate was still 120. He had a very restless night and looked very much exhausted in the morning, the temperature being then 101° and the pulse 116. I warned the friends that operation might be necessary, but they told me not to think of it as they would never consent. Handicapped as I was I determined to persevere with the turpentine fomentations, watching the character and rate of the pulse very carefully. I warned the patient that he must be absolutely still. The pain gradually subsided and within six days the mass in the iliac fossa had almost entirely disappeared. The temperature did not really reach the normal level until the eleventh day and the pulse did not fall below 80 until the tenth day of the disease.

This case is given as an instance of one which, had it

fallen into a surgeon's hands, would undoubtedly have been operated on because the pulse was rapid and continued to be so after the third day. One curious feature of this case is the occurrence of a distinct rigor which is said to be absent in cases of adult appendicitis. Again, for six days we have a pulse-rate of over 100 in a patient who looked very ill. Surely this seemed to be a progressive lesion and one in which operative interference would have been quite justifiable, and yet with very careful and close attention, though with very imperfect nursing, the patient made an excellent recovery under medical treatment alone. Still another interesting phenomenon is the fall of temperature to normal on the third and fifth days, a fact which probably is to be accounted for by the activity of the organisms in their development at the seat of the disease.

CASE 2.—The patient was a male, aged 19 years. When first seen he was complaining of severe pain in the right iliac fossa. His temperature was 101·2° F. and his pulse-rate was 90 per minute. The patient had vomited after partaking of some steak and potatoes and he still felt very sick. He also had a severe frontal headache. He had got himself wet three days before and had allowed his damp clothes to dry on him. He had always been a delicate boy and had often suffered from attacks of muscular rheumatism and acute sore-throat. I ordered him at once to bed and had turpentine fomentations applied. His bowels had moved freely that morning, still I prescribed cascara and restricted his food to milk and potash water. He was very sick all night, continually retching, but towards morning his distress was considerably relieved and the pain in the abdomen was more tolerable. His temperature, however, had now risen to 102·6° and his pulse was 100. In the evening the pulse-rate was 110 and the temperature was 103°. There was considerable dulness in the right iliac fossa but comparatively little pain. He was now getting beef jelly and this he retained perfectly well. I may summarise the after-progress of this case from my notes as follows. On the third day the morning temperature was 102·6° and the pulse was 110. He had not slept at all and felt very weak. The evening temperature had not risen, but the pulse was now 120. His condition had now assumed a somewhat alarming aspect, as the tongue was dry, the pulse very feeble, and there was a tendency for the patient to vomit whenever an attempt at feeding was made. I could make out a distinct mass occupying the right iliac fossa and pressure over it caused considerable pain. The turpentine fomentations were at once repeated. On the fourth day the temperature had fallen slightly, but the pulse-rate was still 120. The pain, however, was not so marked and the sickness had entirely gone. He had again passed a very restless night and was in consequence much exhausted. Whisky in teaspoonful doses every two hours was ordered. At night the pulse and temperature were much the same but the patient said that he felt a little better, and he certainly looked less worn out than in the morning. The pulse, if anything, was stronger. On the fifth day the patient had had a better night and had slept for one and a half hours towards morning. There was not, however, any alteration either in the pulse or temperature. Somehow I did not like the condition of the parts in the iliac fossa and I could make out slight bogginess on palpation. In the evening, therefore, I was pleased to find that the pulse-rate had fallen to 112 and the temperature to 101°. All the same I felt somewhat anxious and was prepared to seek surgical advice. On the sixth day the patient had another restless night, but the pulse was stronger and steadier, its rate being 110. Towards evening, however, the patient began to experience pain in the left half of the abdomen, and though the temperature was still 101° the pulse unfortunately had risen to 130. I ordered a renewal of the fomentations over the abdomen. On the seventh day the patient had had a bad night, tossing about till 3 A.M., when he had fallen asleep, and had slept for fully an hour. When I saw him, at about 10.30 A.M., he said that he had very little pain in the abdomen now, only a very violent throbbing headache. I was astonished to find that his pulse was 116 and his temperature 103°. It was then decided that if he was no better by the afternoon a surgeon should be called in. At 4 P.M. to my great relief the pulse was only 100 and the temperature had fallen to normal or nearly so, while the patient himself felt much better. Later in the evening his whole condition had improved and he had slept for two hours continuously. On the eighth day the pulse was 90 and the temperature was normal. The bogginess was less and the pain was scarcely perceptible. Altogether the patient was much better, though he had not slept much. On the ninth day the pulse and temperature were both normal. The patient had slept well and on waking had felt very hungry. By the twelfth day the bogginess had altogether disappeared, and at the end of the third week the patient was allowed to rest on a couch. In a month he was able to be out of doors.

This case tells its own tale. It may rightly be looked on as a fairly anxious one in which operative interference might have been used. The careful nursing helped not a little to determine the ultimate result. A large pad of cotton-wool placed over the right iliac fossa aided, I believe, in restoring the parts to normal, as after its application the bogginess slowly began to disappear. The use of the ice-bag was a source of much comfort in relieving the troublesome headache, and though morphia was suggested by the patient's friends I did not yield to their solicitations.

CASE 3.—The patient was a woman, aged 28 years. She had been married for 11 months and had no children. I first saw her late in the afternoon and she was then complaining of frequent and painful micturition and pain over the right half of the abdomen. She belonged to a rheumatic family and had herself frequently suffered from sore-throat. She had always a tendency to be bloodless but had never been laid up with any serious illness. She was of a very cheerful disposition. Menstruation had always been normal and there had been no amenorrhœa. She was very constipated, the bowels moving only once or twice a week. She told me that she thought that her illness had its origin a week before when she had been cleaning some windows and gave her side a twist. She had, however, been sitting on a stone doorstep five days before and after taking a bath two nights ago she had shivered and complained of feeling very cold. When I saw her she was lying in bed with the right leg drawn up. She was very cheerful and beyond slight pallor of the lips and conjunctivæ she did not look ill. The temperature was 101·2° F. and the pulse was 100. The tongue was coated and flabby. She had been taking compound powder of rhubarb. For some days past she had been troubled with frequent micturition and had had to rise four or five times during the night. There was some pain during the act. On examination the urine was found to be alkaline in reaction, otherwise it was practically normal. There was pain on palpation along the whole of the colon, but especially over the ascending portion. Masses could be felt there and also in the transverse and descending colon, otherwise the general note over the abdomen was tympanitic. There was no sickness or vomiting. The pain extended through to the back where it was felt most at a point about two inches below the last rib. The diagnosis seemed to lie between appendicitis, perinephritis, and some tubal condition. She had menstruated normally about a fortnight previously and examination proved that both tubes and ovaries were healthy. Perinephritis was not so easily set aside, as there was pain posteriorly with fever and frequent painful micturition. As the bowels were evidently loaded I resolved to start treatment by giving cascara and belladonna. She had 20 minims of the former with five minims of the latter every six hours. On the second day (really the third day of the disease) at 12.30 P.M. the pain was not any easier. The patient had not slept. The bowels had moved once painlessly. There was not so much resistance along the colon. The patient looked worse, however, and the pulse was quicker. The face seemed paler and the eyes were somewhat sunken. There was a hard resistant mass occupying the right iliac fossa, over which there was marked pain on pressure. There was very marked pain on pressure over McBurney's point. There was now little doubt that the case was one of appendicitis and so I ordered turpentine fomentations. No food was given save milk and potash. At 5 P.M. the temperature had risen to 103·8° and the pulse was 120. The patient had slept from 2 to 2.45 P.M. and again from 4 to 5 P.M. and the pain was a little easier. The tongue was dry and she was somewhat feebler, the face having a slightly yellowish tinge. There was an oval-shaped mass to be made out in the right iliac fossa and the pain seemed to start from here and at times it shot down the thigh. A tympanitic note was got over the swelling. The patient was somewhat breathless as the diaphragm was not working well. Micturition was not quite so frequent. I had ordered tincture of hyoscyamus in 30-minim doses every four hours.

At 8 P.M. the temperature had fallen and the pulse, if anything, was slower. The pain was much easier now, but considerable induration was present. The patient could move about in bed more freely. There was much headache and consequently an ice-bag was applied to the head. On the third day at 10.20 A.M. the temperature was again 103·8° and the pulse was 120. She had had a very bad night, but had slept at intervals for two hours. She had not much pain now but she looked very ill. She had been sick and the tongue was very dry. At 1.30 P.M. the temperature had fallen and the pulse was 116. She was feeling easier and looked more cheerful. I ordered whisky and beef jelly in teaspoonfuls alternately every two hours, with milk and iced potash water between times. The thirst was very great and for this I ordered ice. The micturition was practically normal now, though there was a trace of albumin in the urine (due, no doubt, to the rise of temperature). At 6.30 P.M. the pulse was 120 and very full and bounding in character, the carotids in the neck beating violently. The patient felt very much exhausted. At 10 P.M. the pulse was still 120. An attempt to give trional in hot milk and again in iced potash and milk caused retching and bilious vomiting. The mass in the iliac fossa seemed more distinct and was certainly larger. On the fourth day the temperature and pulse were more favourable. She had had snatches of sleep. She looked better and said that she felt a little better but very weak. About 5 A.M. she had some stinging pain in the iliac fossa which was relieved by a turpentine fomentation. There was no apparent change in the mass already referred to and the iliac fossa was now quite dull on percussion. At 6.30 P.M. the pulse had fallen to 96 and the patient was much more cheerful-looking. On the fifth day it was ascertained that she had slept for two and a half hours during the previous night. There had been slight epistaxis. The tongue was not so dry. At 10 P.M. she complained of throbbing headache. The movement of the abdomen was freer and the mass in the iliac fossa was smaller and less resistant. On the sixth day at 10 A.M. the pulse was 84 and the temperature was 99·5°. She had had a good night. There was still some dulness in the iliac fossa but comparatively little pain. At 10 P.M. I was told that the bowels had moved very slightly during the evening. The headache was quite gone. On the seventh day the morning temperature was normal and so was the pulse. There was no dulness in the iliac fossa now and very little resistance to be felt. Menstruation had commenced, though the last period occurred about a fortnight ago. In the evening I found that the improvement was still maintained. On the eighth day I was told that the patient had slept well the night before; she said that she felt distinctly better now. She was ordered arrowroot made with water which she enjoyed greatly. On the ninth day the patient still continued to improve. Some cascara was ordered, also a pill of strychnine and reduced iron. On the tenth day it was said that the bowels had moved painlessly the day before after the patient had had cascara. The patient felt very hungry. Fine sago made with milk was ordered. On the eleventh day the patient said that she felt quite well. The bowels had moved of their own accord on the previous day. She slept for nine hours. She was now wearing a pad of cotton-wool kept in position by a broad domette bandage. From this time the patient continued to make uninterrupted progress. On the fourteenth day she was lifted on to a couch, and at the end of four weeks she was removed to the country where she soon began to put on flesh. She had not had any recurrence of pain and said that she slept and ate well.

From the three cases which I have detailed and from others which I have seen but of which I have no written notes I consider myself warranted in drawing the following conclusions. 1. Although when first seen a case of appendicitis may not seem very serious the patient may with remarkable rapidity develop very grave symptoms. 2. The temperature is not nearly so important as the pulse and is apt to vary to a greater extent during the progress of the illness than is the pulse-rate. 3. A pulse-rate of 120, though necessarily giving rise to anxiety, need not indicate operative interference. 4. We are not entitled to give up any case as hopeless, even though the patient seems in immediate danger and operation is refused. Some, at least, of such cases, do eventually recover.

After all has been said, however, there still remains the difficult question to answer, When are we in duty bound to call in a surgeon? Perhaps it is impossible to be dogmatic, but for my own part I think a surgeon should only be called in when, in spite of the careful carrying out of the treatment already indicated, the patient's condition is evidently becoming worse. In dealing with appendicitis we are apt to expect too much in the way of improvement from day to day. During the satisfactory progress of many of these cases the improvement is sometimes hardly perceptible, but if it is observed after a careful estimation of every factor involved, then we are warranted in persevering with our medical treatment rather than in summoning a surgeon to our aid. I have no hesitation in saying that many cases of appendicitis are operated on which would have made a good and even a speedy recovery under medical treatment pure and simple. Surgeons, urge that there is less risk in operating while the patient's strength has not yet been exhausted than in letting the disease run its course. All this is to a certain extent true, but, as I have already pointed out, we can do a great deal to carry the patient through his illness and to prevent complications setting in by careful attention and by intelligent medical supervision. Treatment during convalescence, too, is of great importance. When the temperature and pulse have remained normal for about a week the patient may be gently lifted on to a couch for a few hours each day. At the end of a month or six weeks he should be sent to some bracing but quiet country place. During this period the greatest care in dieting is necessary, as is also the avoidance of constipation. Nothing that is in the least likely to upset the digestive organs should be taken, and the bowels must be made to act once a day. The convalescent should be warmly clad, woollen underclothing being most essential. He must be careful to guard against chills and should always be indoors before sunset. Some people, even though they have been warned, are very heedless in regard to these matters, and so we should always make a point of impressing on them the utmost need for care in attention to the advice given them. In conclusion, let me say that if medical treatment is to succeed in any particular case it must be undertaken with more than ordinary care and watchfulness. Only in such circumstances will it be found to be of value.

Edinburgh.

MYELOPATHIC ALBUMOSURIA.[1]

BY T. R. BRADSHAW, B.A., M.D. DUB., M.R.C.P. LOND.,

PHYSICIAN TO THE LIVERPOOL ROYAL INFIRMARY; LECTURER ON CLINICAL MEDICINE IN LIVERPOOL UNIVERSITY COLLEGE; CONSULTING PHYSICIAN TO THE SAMARITAN HOSPITAL FOR WOMEN, LIVERPOOL.

As the art of medicine advances progress in nosology takes place along two different lines. Sometimes, as the boundaries of our knowledge are extended, we are led to recognise that morbid conditions apparently diverse are essentially identical, as when lupus, struma, phthisis, and pulmonary cirrhosis, at one time looked upon as distinct diseases, were found to be only various manifestations of the action of the same bacillus. But the establishment of identity in place of apparent diversity is comparatively rare; far more frequent is the separation of morbid processes which have been regarded as identical. Thus measles came to be distinguished from scarlet fever, typhoid fever from typhus fever, locomotor ataxy from paraplegia, and the different kinds of paraplegia from one another. Quite recently Dr. A. E. Garrod[2] expressed his conviction that under the term "rheumatoid arthritis" at least two distinct diseases are included. In fact, with few exceptions, progress in pathology and diagnosis has in the past meant the recognition of diversity in place of identity, and there can be little doubt that progress in the future will be along similar lines. When it has been established that two morbid entities have been included under a common designation it is usual to regard one of them as a new disease and to mark its individuality by labeling it with a new name. In this sense I claim that the disease I am about to describe is a new disease, and I have marked out its individuality by naming it "myelopathic albumosuria."

[1] A paper read before the Liverpool Medical Institution on March 27th, 1902.

[2] A Discussion on Chronic Diseases of the Joints, &c., Brit. Med. Jour., vol. ii., 1901, p. 1035.

HISTORY.

From ancient times physicians have recognised a disease characterised by softening and deformity of the bones, a disease which has long been known as "osteomalacia" or "mollities ossium." With the advance of clinical and pathological observation it came to be recognised that cases of softening of the bone in adults differed materially from one another, both clinically and anatomically, and might be divided broadly into two groups. In one group the patients were young and mostly women, recovery, temporary or permanent, was not infrequent, and the essential lesion was absorption of lime salts and the replacement of the bony structure by a simpler type of connective tissue. In the other group the patients were generally men in the second half of life, recovery did not take place, and the essential lesion was the invasion of the bone by cellular growths of the connective-tissue type, either generally diffused throughout the bone or forming circumscribed tumours and leading to absorption of the osseous structure. For the former state the name of "osteomalacia" was retained, for the latter the term "multiple myeloma," which was introduced by von Rustizky in 1873,[2] was adopted. About 12 years later it was found that in a case which was afterwards proved by a necropsy to be one of multiple myeloma the urine contained a peculiar body chemically allied to albumin and known as Bence Jones's albumose, and by a hasty generalisation it was inferred that this body was always present in multiple myeloma and would serve to distinguish it from mollities ossium.[4] Finally, it came to be recognised that albumosuria was not a feature in all cases of multiple myeloma, that it was only present in some of them, and that, although in all the fatal cases of albumosuria which were examined some extensive lesion of the marrow and generally of the bones was found, the exact nature of the lesion was by no means identical in all cases.[5] The cases which possess these features—viz., that they have albumose in the urine and some affection of the marrow—seem to form a group of themselves and to them I apply the designation "myelopathic albumosuria."

The number of cases of this disease which I have been able to collect from the literature or from personal investigation is about 20. Of the patients thus affected I have myself examined three, and of two other cases I have received samples of the urine for examination. The first patient whom I saw was a man in Liverpool whom I had under observation for nearly a year and whose case I have published at great length elsewhere;[6] the second was that of a man under the care of Dr. F. Parkes Weber, who kindly permitted me to examine him, in the German Hospital at Dalston; the third was that of a physician of eminence in Lyons, who wrote to consult me about his condition, and whom I visited at his home in Lyons in the summer of 1901.[7] One of the patients whom I did not see, but whose urine I was permitted frequently to analyse, was a gentleman residing near Liverpool who was seen in consultation by my colleague, Dr. James Barr.[8]

ETIOLOGY.

Of the causes which predispose to myelopathic albumosuria we know nothing except that its incidence is in the second half of life and that it has been more often met with in the male than in the female. In the youngest recorded case the patient's age was 36 years, and in the oldest it was 71 years; while of 18 cases in which the age is stated 14 were between 35 and 55 years, being pretty evenly distributed over the intervening period. Of 20 cases in which the sex is stated 15 were males and five were females. One patient whom I saw was actually the subject of a gumma in the tongue, and another was stated to have had syphilis in early life, but hitherto there have not been sufficient grounds to indicate a causal relation between the two diseases.

PATHOLOGICAL ANATOMY.

The morbid anatomy and pathology may be best considered under two heads—viz., the changes in the skeleton and the changes in the urine. The former consist in an invasion of certain bones by a soft mass of new growth, the proper osseous tissue undergoing absorption. The growth may be confined to the interior of the bone, being limited by the compact tissue, or it may burst through the latter and form tumours of considerable size in the adjacent structures. As to the bones chiefly affected, the ribs, sternum, and vertebral bodies seem always to suffer, less frequently the pelvic bones and the skull, and in only one or two instances have any of the long bones of the extremities been involved. The new growth is gelatinous, soft, and vascular and has a general resemblance to red marrow. Microscopically, it is seen to be composed chiefly of round cells, with little or no intercellular substance. Fat globules are often present in the cells and occasionally cells of a higher type are met with; thus, spindle-cells may be noticed here and there, and in one case islets of cartilage are stated to have been present. In structure and clinical progress the growth seems to be closely allied to sarcoma, but it differs from the common forms of sarcoma in its invasion of several parts of the skeleton simultaneously and in its showing no tendency to form metastases in other parts or organs. As to the most appropriate designation for this kind of growth, I think the term "multiple myeloma," which was introduced by von Rustizky in 1873, and has been adopted by most of the German authorities, is the most appropriate. Its position and structure lead us to infer that it is really an outgrowth or hyperplasia of the normal marrow, while its independent appearance in various parts of the skeleton is fairly well indicated by the appellation "multiple." The condition of the urine, which I consider to be pathognomonic of this disease, I have so often described before[9] that I need only refer to it briefly. It contains a proteid closely resembling albumin, but differing from albumin in certain particulars, of which the following are the most obvious: (1) It coagulates at a remarkably low temperature—viz., 58° C.; (2) the coagulum is to a great extent dissolved at the boiling-point and reappears on cooling; (3) the coagulum which forms on treatment with cold nitric acid also dissolves on boiling and returns on cooling; and (4) it is readily coagulated by hydrochloric acid.

As I have already said, it was at one time supposed that multiple myeloma was always attended by albumosuria, the apparent exceptions being attributed to errors of observation. This view I never accepted and the most recent observations have fully disproved it. On the other hand, I am not aware of any instance in which persistent albumosuria such as I have described was present and the bones and marrow have been proved to be normal by post-mortem examination.

SYMPTOMS.

The onset of the disease is insidious; the earliest symptoms observed may be either those associated with the state of the bones or those associated with the state of the urine. As a rule it is the bone condition which first leads the sufferer to seek medical advice, though there can be little doubt that the characteristic reaction of the urine would be found at a very early period if it were looked for. Kahler's patient,[10] who was a medical practitioner, had albumosuria for several years. In my first case the patient observed that his urine was milky many months before he felt ill, and the patient I saw in Lyons had been passing albumose for nearly a year and a half before he had to relinquish an active practice.

As regards the manner in which the albumose makes its appearance there is only one observation on record, and that is in connexion with the case at Lyons. This patient had an attack of pneumonia in December, 1899, from which he made a good recovery, but during convalescence traces of proteid were discovered in the urine and the quantity gradually increased until it was as much as 10 per mille. If, therefore, we may be permitted to generalise from this single case, we may state that although in the developed disease the albumose is abundant it is first excreted in traces and the amount gradually increases.

It is obvious that the abnormal state of the urine is not likely to be discovered until the sufferer becomes a patient, and it is generally the condition of the bones or the associated general debility which leads

[2] Deutsche Zeitschrift für Chirurgie, Band iii., S. 163, 1873.
[4] O. Kahler: Zur Symptomatologie des Multiplen Myeloms, &c., Prager Medicinische Wochenschrift, 1889, N. 4, 5.
[5] Bradshaw: A Case of Albumosuria, &c., Transactions of the Royal Medical and Chirurgical Society, 1898, p. 259. Bradshaw and Warrington: Myelopathic Albumosuria, ibid., 1899.
[6] Ibid.
[7] Bradshaw: The Evolution of Myelopathic Albumosuria, Brit. Med. Jour., July 13th, 1901.
[8] Case of Myelopathic Albumosuria, Liverpool Medico-Chirurgical Journal, March, 1901.
[9] Bradshaw: Discussion on the Proteids in Urine. Transactions of the Pathological Society, vol. li., part 2, 1900, &c.
[10] See note 4.

him to consult a medical man. In fact, pains in the back and sides, suggesting rheumatism or neuralgia, together with progressive anæmia and weakness, are in most instances the earliest symptoms of the complaint. The pains are generally severe; they are aggravated by movement and are accompanied by local tenderness. A remarkable feature is that they vary in position and intensity from day to day and from week to week, and the sufferer may sometimes experience so great and prolonged a relief that the friends, and even the medical attendant, may be deluded into the belief that a real improvement is taking place. The patient in my first case, after being confined to bed for weeks in great agony, recovered sufficiently to go into the country, where he used to walk in the garden; but before many months the pains returned and were ended only by death. Physical examination of the bones yields results which differ considerably in different cases. In my first case no enlargement or tumour was felt, but the spine was fixed and bent, while the ribs seemed to have lost their natural rigidity, so that the chest walls seemed to yield under the pressure of the hand or of the stethoscope, and irregularities suggesting fractures could be felt by the finger. In the other two cases which I have seen distinct tumours were found in relation to the bones. The Lyonese physician had a semi-fluctuating swelling of about the size of a large hen's egg in connexion with one of the ribs, and the x rays showed that there was a breach of continuity of the bone. The only tender spot I could find was on one of the ribs over the præcordium. The spinal column was quite moveable. Anæmia and lassitude are profound towards the close, but present no special characteristics.

PROGNOSIS

The course of the disease is from bad to worse, though, as I have already stated, it is often not uniformly so. It is rare for life to be prolonged for a year after the symptoms are sufficiently pronounced to lead the patient to seek advice, but in Kahler's case it is alleged that some symptoms were present eight years before death. The prognosis is pretty much the same as in malignant disease; death may be due to exhaustion or to some intercurrent disorder, of which pneumonia seems to be not infrequent. My first patient developed pneumonia while I was watching his case, but recovered, to die six months later worn out by pain, weakness, and diarrhœa. The Lyonese patient died a week after my visit from acute pneumonia, while the bone disease seemed to be not yet far advanced. It is an interesting fact that in the former case I was able to recognise the presence of albumose in the pneumonic sputum.

CHEMISTRY AND PATHOLOGY.

The exact chemical nature of the proteid in the urine and its relation to the changes in the bones present problems of the highest interest for our consideration. The earlier observers, Kühne and Huppert, identified it with hetero-albumose, one of the products of the peptic digestion of albumin, but Matthes of Jena has proved conclusively that it is not hetero-albumose and that it is distinct from all other known proteids, being, in fact, a body *sui generis*.[11] It seems in some respects to occupy a position intermediate between the native albumins and the proto-albumoses. Many elaborate chemical investigations into its nature have been carried out, the most important being those of Matthes, of Magnus Levy,[12] and of Gutterink and de Graaff.[13] The two latter experimentalists have recently succeeded in obtaining abundant crystals of the body by a method analogous to that by which crystals of albumin can be obtained from the serum of the horse. This is interesting as the substance in question is the only human proteid which has up to the present been obtained in a crystalline form and it may indicate that it is less complex than serum albumin. This conclusion is borne out by the observation of Magnus Levy that the body in question does not yield hetero-albumose when submitted to artificial digestion, from which we may infer that it does not contain the hetero-albumose radicle which is a constituent of normal albumin. In our present imperfect knowledge of the constitution of the proteids we can safely only affirm that the substance is one closely allied to albumin and probably is somewhat less complex in its constitution, and we may conveniently designate it as the Bence Jones albumose, from the chemist who first described it. As regards the mode of formation of the substance three different views have been put forward:—1. The old view, which has been recently revived by Magnus Levy, was that it is derived directly from the proteid constituents of the food, which for some reason fail to undergo the normal metabolism. This view ignores the fact which lies at the root of the whole problem—viz., the association of the albumose with disease of the bones and marrow. 2. Another view is that the albumose is produced by some abnormal metabolism taking place in connexion with the new growths in the bones. How this could happen is at present a matter of pure conjecture, but it might conceivably take place through the action of a ferment. 3. Finally, it has been suggested recently that the formation of the albumose takes place as the result of the loss of some function of the bone marrow owing to the destruction of the latter.[14] Time will not allow me to review these hypotheses in detail. I will only say with regard to them that the second—namely, that the albumose is actually produced in connexion with the new growths—is, in my opinion, that which agrees best with the clinical course and morbid anatomy of the disease.

It is not possible within the limits of a single paper to consider exhaustively any one disease in all its aspects. One must either treat the whole more or less in outline or concentrate one's attention on a few features which may be dealt with in detail. In describing a disease such as myelopathic albumosuria, which few of us have ever encountered, the former method seems to me to be the more appropriate, and I have therefore endeavoured to give a general picture of the disease as it has presented itself to me in my practice and my reading, laying special stress on what seem to me to be its more characteristic features, and hinting at the more pressing problems which it presents to the physician and the pathologist.

Liverpool.

[11] Neumeister: Lehrbuch der Physiologischen Chemie, S. 805.
[12] Ueber den Bence Jones'schen Eiweisskörper. Hoppe-Seyler's Zeitschrift für Physiologische Chemie, Band xxx., S. 200.
[13] Ueber die Darstellung einer Krystallinischen Harnalbumose, ibid., Band xxxiv., S. 393.

[14] Donetti: Rivista Critica di Clinica Medicina (Florence), Nov. 16th, 1901.

MULTIPLE TYPHOID ABSCESSES;

SECONDARY HÆMORRHAGE; LIGATURE OF PROFUNDA FEMORIS; RECOVERY.

BY HERBERT C. JONAS, M.B., B.S. LOND.,
SURGEON TO THE BARNSTAPLE AND NORTH DEVON INFIRMARY.

With a Note on the Agglutinative Power of the Blood in the Case by C. G. SELIGMANN, *M.B., M.R.C.P. Lond., Superintendent of the Clinical Laboratory at St. Thomas's Hospital, London.*

THE patient was a male, aged 25 years, resident at Ramleh, Alexandria. The previous history and the family history were good and unimportant. As to the present illness it was ascertained that on Sept 1st, 1899, whilst in Alexandria the patient had had an attack of enteric fever; he had one sharp hæmorrhage, otherwise nothing of note occurred during the illness. I have been unable to find out whether Widal test was used, but I think not. Seven weeks after this he had gone to Cairo as an invalid, where he had a relapse of moderate severity. He was sufficiently well by Dec. 23rd to return to Alexandria, but was still an invalid. He was now said to have phlebitis in both thighs. About the same time he developed periostitis of the right tibia, sinuses formed on the anterior margin of the bone, and discharged till about June, 1901, when they healed over but afterwards repeatedly broke down. In September, 1901, he started for home. Whilst on board ship both thighs began to swell and he had great pain in them and could move neither limb. His temperature was raised, but he could not say to what height. There was no history of rigors at any time throughout the illness. Soon after his arrival in England pus was diagnosed and he was sent to St. Thomas's Home, where he arrived on Sept. 25th, 1901.

The patient was a very sallow, wasted man, looking extremely ill, with great pain, tenderness, and swelling in both thighs. The pulse was 120, the respirations were 20, and the temperature was 103° F. The left thigh was generally

œdematous and puffy and there was obvious fluctuation to the inner side and behind the sartorius for about a space of eight inches in the middle of the limb. The whole of the upper part of the right thigh was one huge abscess cavity. Fluctuation was obtained from side to side through the thickness of the limb at the level of the apex of Scarpa's triangle. On the right leg there were four scabs on the anterior margin of the tibia over unhealed bone sinuses. The urine was normal. As the patient was tired out with his long journey from the Isle of Wight it was decided to postpone the operation until the following morning. On Sept. 26th operation was proceeded with, it being hurried throughout as the patient's condition was very bad. Two three-inch incisions were made on the inner side of the left thigh, through which about two and a half pints of pus were evacuated, and two drainage-tubes were inserted into the cavity. Some pus from this abscess was collected in a sterile test tube for bacteriological examination. In the right thigh two incisions were made, one on the inside and the other on the outside of the limb, the inner incision being just behind, and internal to, the line of the femoral artery; a single drainage-tube was passed through behind the femur and out on the external surface of the limb. This abscess contained about one and a half pints of pus. No bare bone could be felt in either limb. After the operation there was a free and copious discharge from all four incisions. The temperature came down somewhat at first, but was still very irregular, and on the 29th it reached 105°. at midnight. The wounds were syringed out twice daily with sterilised water, much pus coming away at each dressing. On Oct. 3rd the tube on the right side was removed and was cut into two pieces. On the 4th at 8.30 P.M. the patient had a sudden and severe hæmorrhage from the right thigh. He was at once taken to the theatre. His condition was very bad. The pulse was running and hardly countable, but it was over 150; he was sweating profusely and was very restless. He had an injection of strychnine and as soon as he was under the anæsthetic three pints of saline were infused into the left median basilic vein. The wound on the inside of the right thigh was then freely opened up. Three inches of the superficial femoral artery lay bare in the cavity, but the vessel was intact and the bleeding came from below this. The bleeding point was then discovered to be in the deep femoral artery at the bottom of the wound and opposite to where the tube had gone through. The tissues were very rotten but the bleeding point was secured. The artery was tied above and below and the first perforating branch which came off just above was also ligatured. This vessel was running quite unsupported across the cavity. Owing to the condition of the tissues it was not possible to clean the vessel properly, so the sheath and in the case of the lower ligature the vein also were included. The wound was plugged with cyanide gauze. The patient passed a very poor night; morphia administered at 4 A.M. gave him some sort of rest. The temperature remained subnormal for 36 hours, but on the 6th it began to rise again. The pulse after the operation was 160 and did not drop to 120 till the 15th. From then till Nov. 12th he made rapid progress, putting on flesh at a great rate. On this date I find a note to the effect that the wounds of the left thigh were quite healed; those of the right, however, remained stationary. On the 25th a third operation was carried out. The wounds in the right thigh were again opened up and a lot of soft granulations were scraped out, four small sequestra were removed from the right tibia, and the wounds were plugged. By Dec. 10th the tibia had healed and the other wounds were healing. On Jan. 6th, 1902, the patient went to Eastbourne, under the care of Dr. W. J. C. Merry, where the sinuses all began to heal rapidly. He returned to Egypt and has since written that he is in perfect health and that all his sinuses are closed.

These cases of long-deferred abscesses after enteric fever are always noteworthy, though this case is, of course, by no means a record; thus Buschke mentions one containing the bacillus typhosus which occurred in bone 46 years after the fever. In literature bone seems to be the favourite seat of these collections, and this suggests, I think, one reason for the long period before manifestation.

With regard to the origin of the abscesses in this case it is certain that they did not start in bone. A suppurating thrombosis is another hypothesis; against this is the fact that the patient showed no signs of obstructed circulation in the leg. Neither were the abscesses muscular in origin. Lymphatic infection of glands could only account for the abscess in the right thigh, so that it perhaps seems more reasonable to explain both by a blood infection.

With regard to the hæmorrhage I am afraid that the drainage-tube must be held directly responsible, as there was no doubt that the rupture occurred just at the spot where the tube must have pressed upon the artery and caused ulceration. Gauze-plugging would perhaps have avoided this but would almost certainly have bottled up the pus, and to provide drainage for the abscesses was all that could be done at the first operation. I chose tying the artery at the bleeding point, for although the tissues were rotten the cavity was cleaning up, and with a leg in the condition of that of the patient tying the common femoral artery (which was the only alternative) seemed to be taking a bigger risk. The after-history seems to me to justify that choice.

The bacteriology is dealt with later by my friend Dr. Seligmann, but there is one interesting clinical point which may be here noted. At the first operation we obtained a pure typhoid culture from the right thigh and though several cultures were subsequently taken from both abscesses the ordinary pus organisms alone were found. Up to the time of taking the second culture no one but myself had dressed the case. As I was continually engaged in surgical work I always wore fresh boiled rubber gloves and, of course, used nothing but sterilised dressings, towels, &c. Yet in spite of these rigid precautions the original bacillus typhosus had been completely killed out by staphylococci.

NOTE BY DR. SELIGMANN.

The pus received in a sterile test-tube from Dr. Jonas was creamy-white and practically inodorous. On culture a pure growth of a rod-shaped organism was obtained, which did not retain Gram's stain or liquefy jelly, and which suggested one of the "coli" group. Without going into details it may be said that the original agar growth and nine sub-cultures from an agar plate incubated at 37° C. were rigorously examined. All of these corresponded in every respect with the cultural tests for the bacillus typhosus.

Agglutination.—Cultures, from 18 to 24 hours old, taken from nine colonies, were tested against the blood of three typhoid fever patients then entering convalescence after typical moderately severe attacks of the disease. In each case an instantaneously complete reaction was given in dilutions of 1 in 20 and 1 in 50. With a dilution of 1 in 200 the reaction with each of the three sera was complete in 10 minutes and the same held good on testing a sub-culture of the parent culture against two of the sera referred to. On testing the effect of the patient's serum on a laboratory strain of the bacillus typhosus a complete reaction was obtained in a dilution of 1 in 10 in 30 minutes; with a 1 in 20 dilution only loose clumps with some motile bacilli between them were noted in the same time. The effect of the patient's blood serum on the colonies of his own organism was also examined. Contrary to expectation, the reaction was almost as weak. In a dilution of 1 in 10 all colonies were typically affected within 30 minutes; with a dilution of 1 in 20 the effect was rather more marked than with the laboratory strain of the bacillus typhosus, but clumping was not absolutely and typically complete within the time-limit mentioned. Considering the time (nearly two years) since the patient's original illness, the reaction must be decidedly classified as "late," using the term in the sense that the reaction is present longer after the original disease than is usually the case. In support of this the following figures which Dr. H. S. D. Browne, who has examined the blood of a number of old typhoid fever patients, kindly permits me to quote are of interest. The serum of 15 subjects examined from eight to 12 months after enteric fever gave a negative reaction in every instance except one, although in seven of these centres of agglutination or loose clumping without marked loss of motility occurred in 30 minutes in a dilution of 1 in 20. This group includes two of the cases already alluded to who during convalescence gave a typical reaction in 10 minutes with a dilution of 1 in 200. One of these after 10 months presented absolutely no sign of agglutination, in the other after 11 months some loose clumping in a dilution of 1 in 20 without loss of motility was observed. Another group of 11 cases examined from 13 to 24 months after the original disease gave a positive reaction (1 in 20 in 30 minutes) in two instances, and some loose clumping with little loss of motility in one other instance. The patients examined all

gave a reaction in 30 minutes with a dilution of 1 in 50 during their disease (determined in this laboratory), technique identical with that made use of by Dr. Browne being employed.

The comparatively weak serum reaction noted in Dr. Jonas's case may perhaps be regarded as directly due to infection by the bacilli present in the large and rapidly spreading abscesses from which the patient suffered; in favour of this view is its simplicity and completeness. Its adequacy may, however, be doubted. Cabot[1] states that Da Costa examined the blood of a girl suffering from suppurative arthritis of the knee due to the typhoid bacillus without obtaining a decided reaction, although the patient had recently suffered from a severe attack of enteric fever. Again, were the abscesses responsible for the agglutinative power of the blood it would seem reasonable on *a priori* grounds to expect a higher agglutinative effect than was actually observed. Further, while no typhoid bacilli could be recovered from the patient by the latter half of October, the agglutinative power of his blood, as tested against subcultures of his own organism and a laboratory strain of typhoid, remained the same immediately after the abscesses were evacuated in November and early in January, 1902.

A perhaps more reasonable view is to consider the agglutinative effect present the remains of an originally high agglutinative power produced by the original disease which has become weakened by time, and which was not reinforced by the rapidly multiplying bacilli present in the abscesses.

Barnstaple.

NOTES OF THREE CASES OF INOPERABLE CANCER OF THE BREAST TREATED BY REMOVAL OF THE OVARIES.

BY D'ARCY POWER, F.R.C.S. ENG.,

SENIOR SURGEON TO THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA; ASSISTANT SURGEON AT ST. BARTHOLOMEW'S HOSPITAL, LONDON, E.C.

THE adoption of any new method of treatment in connexion with so important a disease as cancer renders it necessary, I think, for each surgeon to record his results in as unbiased a manner as possible. I publish the notes of these three cases of inoperable cancer of the breast treated by removal of the ovaries in the hope that they may be of service to those who are attempting to solve the problem of the causation of cancer.

CASE 1.—A single woman, aged 52 years, was sent to London in August, 1898, suffering from ascites and a large fungating cancer of the right breast. The axillary and supra-clavicular glands were so greatly enlarged and fixed that it was impossible to remove them. The patient seemed to be so ill that it appeared doubtful whether she would survive an operation, though she was very anxious that something should be done. I removed the fungating breast as quickly as possible, leaving the glands untouched, and whilst she was under the anæsthetic Dr. W. S. A. Griffith removed both ovaries. When the abdomen was opened the intestines were seen to be studded everywhere with secondary carcinomatous nodules. The patient made a good recovery and lived for six months afterwards.

I do not think that the removal of the ovaries exercised much effect upon the progress of the cancer, but the patient was happier and better in the belief that something had been done and in the knowledge that her ulcerated breast was replaced by a scar. The removal of her ascites, too, gave her great and permanent relief.

CASE 2.—A widow, aged 42 years, once a hospital nurse, was admitted into St. Bartholomew's Hospital under my care on April 21st, 1902, suffering from a carcinoma of the right breast which she had noticed for a year. A large mass of carcinoma involved the breast. There were secondary growths in the skin, in the axillary glands, and in the infra-clavicular fossa. There was also a suspicious swelling in the left breast. The right breast was immoveably fixed to the deeper tissues. I showed her to my surgical colleagues at St. Bartholomew's Hospital on a Thursday at "consultations" and they agreed unanimously that the case was inoperable by the ordinary methods. I removed the ovaries on the 24th. They were cystic and contained nodules of a spheroidal-celled carcinoma. Convalescence was uninterrupted and the patient left the hospital on May 18th, her weight being 10 stones and two pounds. After the operation the patient suffered a great deal of pain in both breasts, but at the time of her discharge the breasts were painless; the growth in the right breast was smaller and softer, whilst the nodules in the skin were much less marked than at the time of her admission.

The patient presented herself again for examination on June 19th, when she weighed 11 stones and half a pound in her clothes, which led her to say that she had increased just seven pounds in weight. She reported herself as greatly improved in health and as having ceased to menstruate, although before the operation she had been quite regular. The left breast was nearly free from mastitis; the right breast was freely moveable upon the underlying tissues, and the skin over it was much less nodular than it had been a month previously. The growth in the breast was smaller and the axillary and infra-clavicular glands were diminished in size but had by no means disappeared. I showed her again to my colleagues at St. Bartholomew's Hospital and asked whether it was not now advisable to remove the right breast and to extirpate the glands in case the benefit should prove to be only temporary. They recommended me, however, to wait for some time longer as the improvement was so marked and appeared to be progressive. I saw the patient again on August 28th and found that she was still in good health with a greatly improved colour. The right breast was even more soft and moveable than in July and the glands in the axilla were imperceptible. The left breast was free from cancer, but it still showed signs of mastitis. The patient complained of pain and swelling along the inner side of the left arm as low as the internal condyle of the humerus. Mr. H. T. Butlin, who kindly saw the patient at my request, thought that the swelling was identical with the lymphatic œdema which is so often seen after extensive operations for cancer of the breast. The weight of the patient remained unchanged at 11 stones.

CASE 3.—A very fat woman, weighing 16 stones and aged 55 years, was admitted into St. Bartholomew's Hospital under my care on August 6th, 1902, suffering from an inoperable cancer of the left breast. Both breasts were alike four months previously and shortly afterwards she noticed a slight hardness and thickening of the tissues on the outer side of the left breast. The induration had spread rapidly until it involved the whole breast and the nipple retracted as the breast increased in size. It was noted on her admission to the hospital that both breasts were very large. The left breast was greatly swollen. It was hard and firmly fixed to the pectoral muscle. The skin was brawny and puckered over the whole breast and for some distance beyond it to the clavicle and the nipple was retracted. A mass of thickened tissue extended into the axilla, but the patient was so fat that it was impossible to ascertain whether the axillary glands were enlarged, nor could any glands be felt above or below the clavicle. The menopause had occurred eight years previously. I judged the case to be quite inoperable by amputation and I therefore removed her ovaries on the 19th. They were somewhat atrophied and were smaller and firmer than usual, but the pathological report says that they were free from cancer. The patient made an excellent recovery and was sent to the Convalescent Home at Swanley on Sept. 10th. From the second day after the removal of the ovaries she complained of severe pain in the left breast and this continued until Sept. 2nd. On August 30th the left breast was much softer than before the operation and it readily pitted upon pressure. The softening soon disappeared and when the patient left the hospital the breast had returned to its condition of extreme hardness. The patient weighed 15 stones and 10 pounds.

Three cases are of no value except for statistical purposes, and all that can be said of the three here recorded is that the removal of the ovaries in the woman who had not passed the menopause was followed by an arrest and apparently a retrocession of the cancerous process, whilst in the other two cases the operation was not attended by any benefit. The lymphatic œdema of the arm which was associated with the changes in the glands in Case 2 appears to be interesting, especially if it is found to be of common occurrence.

Chandos-street, W.

[1] The Serum Diagnosis of Disease, 1899, p. 77.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF PULMONARY AND TRICUSPID REGURGITATION FOLLOWING CHRONIC BRONCHITIS AND EMPHYSEMA.

(Under the care of Dr. H. D. ROLLESTON.)

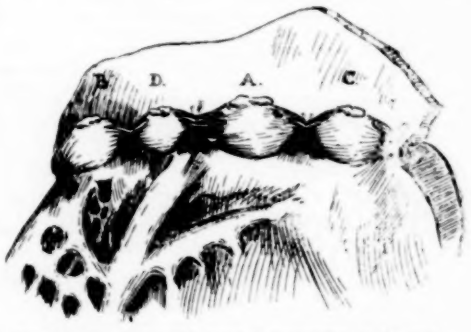
THE rarity of pulmonary incompetence and the peculiar character of the abnormality of the pulmonary valves in the following case render it one of unusual interest. The notes of the case were taken by the late Dr. E. Delafosse Bond, late house physician, and Dr. R. Salusbury Trevor, assistant curator of the museum.

A man, aged 41 years, was first admitted into St. George's Hospital on Feb. 8th, 1900. He gave a history of having had for six years a winter cough which had latterly become almost continuous. For two years he had had œdema of the legs, ascites, and frequent streaky hæmoptysis. He complained of cough and pain in the chest. On admission he was much cyanosed, with dilated venules on the face and pulsation of the jugular veins. He was very dyspnœic and coughed up blood-tinged sputum. His lungs were emphysematous and full of rhonchi and sibili. The heart sounds and the position of the apex beat were normal but the right side of the heart was dilated to three fingers' breadth beyond the sternal margin. The liver was enlarged and extended two fingers' breadth below the costal margin. There was œdema of the loins and lower extremities. He improved and left the hospital. Another breakdown occurred one month later and he returned to the hospital until July, 1900.

On Jan. 6th, 1901, he was re-admitted into the hospital with dyspnœa, intense cyanosis, constantly recurring cough, and much epigastric pain. Râles and rhonchi were heard all over the lungs; there were signs of collapse at the bases. All the extremities, the legs especially, were very blue. Much ascites and œdema of the legs were present. The pulse was irregular and the urine was albuminous. The heart was in much the same condition as it had been before but the pulmonary emphysema and adventitious sounds present interfered with its examination. A soft systolic murmur at the apex was made out and the pulmonary second sound was accentuated. No murmurs were audible in the pulmonary area.

On March 11th, 1902 he was admitted under the care of Dr. Rolleston with the same symptoms, but they were worse than before. All the signs were exaggerated; the cyanosis was more intense, venous pulsation and œdema were much increased, the lungs were more choked, and the liver now reached to the umbilicus. The size of the heart was estimated with difficulty owing to the emphysema, but much enlargement of the right side was thought to exist. The apex beat was neither visible nor palpable. The heart sounds were faint and distant. A soft systolic murmur was heard at the apex and in the pulmonary area; while a definite diastolic murmur had now developed over a limited area in the third, fourth, and fifth spaces to the left of the sternum, not audible immediately along the border of the sternum but a little external to this. The aortic second sound was clear. A soft systolic murmur was heard occasionally over the tricuspid area just to the left and low down, but as a rule could not be heard. Orthopnœa, ascites, and hæmoptysis persisted in spite of treatment and a good deal of pain and tenderness in the abdomen were complained of. On April 14th the cough suddenly became much worse; the cyanosis increased and deepened with each coughing attack. There was a rigor and the temperature rose to 104°F. with rapid pulse and respiration. Venesection was performed but gave only very temporary relief. The patient died on the same day.

Necropsy.—The body was examined 14 hours after death. It was well nourished. The lower extremities and penis were œdematous. On opening the chest each pleural cavity was found to contain half a pint of fluid. The lungs were covered with recent fibrin except at their bases and the lower part of their outer surfaces, where they were firmly adherent to the diaphragm and chest wall. Both lungs were bulky and heavy and emphysematous on their anterior surfaces. The right lung weighed two pounds five ounces and the left lung one pound six ounces. Both were œdematous with the exception of the right lower lobe, which showed to the naked eye and under the microscope early pneumonic consolidation. The bronchial tubes in both lungs were thickened and filled with muco-purulent secretion. The branches of the pulmonary artery were markedly atheromatous. The pericardium contained a slight excess of fluid. The heart was large and weighed 20 ounces. The right ventricle was considerably dilated and hypertrophied. The tricuspid valve admitted five fingers easily, the orifice being obviously dilated. The valve leaflets were healthy.



Reproduction of drawing (semi-diagrammatic) of the pulmonary valve. A, Right anterior segment. B, Left anterior segment. C, Posterior segment. D, Additional segment.

The pulmonary orifice looked larger than normal and measured 3⅛th inches in circumference. It was guarded by four cusps, all of which were delicate and thin, and fenestrated at their margins. The additional cusp (D in the Figure) was placed between the right and left anterior segments (A and B respectively) and was a little smaller than these although well formed. It was fenestrated on either side, the openings being, however, above the line of contact, as is usually the case when they are present. The fenestration on the right side of the cusp was the larger and was divided by fine septa. The right anterior segment was exceedingly thin and extensively fenestrated, the fenestrations on the side next the abnormal valve extending right down to its base *below the line of contact*. The left anterior segment was fenestrated on the side next the additional cusp and the posterior cusp was fenestrated on both sides. In both these, however, the fenestrations were above the line of contact. In the situation of the corpus Arantii in each segment was a large, irregular, projecting nodule, which was seen under the microscope to be composed of well-formed fibrous tissue. Each nodule had a glistening surface and was slightly bossed. The symmetrical situation of the nodule in each valve in the place of the corpus Arantii, the delicate flexible state of the cusps, and the absence of any other signs of endocarditis suggested the view that they were hypertrophied corpora Arantii. Unfortunately, the valve was not submitted to the water test. The right auricle was dilated and hypertrophied. The foramen ovale was closed. The left ventricle was a little hypertrophied. The mitral orifice admitted three fingers; the valve segments were normal. The aortic orifice measured $3\frac{3}{4}$ inches in circumference and the cusps were healthy. The left auricle appeared to be of normal size. The heart muscle was good. The abdomen contained three pints of straw-coloured fluid. All the viscera showed chronic venous engorgement, the liver weighing 4 pounds 12 ounces, and extending to within three fingers' breadth of the right anterior superior spine.

Remarks by the late Dr. BOND *and by* Dr. TREVOR.—Pulmonary incompetence is very rarely met with as a cardiac

lesion in the post-mortem room. Newton Pitt[1] states that in 11,000 examinations made at Guy's Hospital during 23 years this defect was only noted 17 times. The etiological factors concerned in the production of the lesion are complex, but fall according to Pitt[2] into six groups: (1) infective endocarditis; (2) dilated pulmonary artery; (3) aortic aneurysm pressing on the pulmonary valves; (4) abnormality in the number of valves; (5) pulmonary stenosis; and (6) unclassified—comprising various changes in the valves not included above. The case which we describe falls into the last group; for, though dilatation of the pulmonary artery and an abnormal number of valves were found coexistent, there were other imperfections in the cusps which most probably had their share in rendering the valve incompetent.

It does not appear that there was evidence of any cardiac lesion except dilatation until the patient's third admission to the hospital. It was then noted that the pulmonary second sound was accentuated. Later, it was thought that the tricuspid valve was incompetent on account of double pulsation in the veins of the neck and the presence of a soft systolic murmur heard occasionally in the tricuspid area. A soft systolic murmur was also heard at the apex. When the patient was admitted for the fourth and last time under the care of Dr. Rolleston the presence of a systolic apical murmur, in addition to the pulmonary diastolic murmur, suggested the diagnosis of mitral stenosis with backward pressure on the lungs and right side of the heart, giving rise at this later stage to dilatation of the pulmonary artery and the development of Graham-Steell's "murmur of high pressure in the pulmonary artery."

Dilatation and atheroma of the pulmonary artery and functional incompetence of the pulmonary valve, evidenced by a murmur such as was heard in our case, have recently been insisted upon by Bryant[3] as complications of advanced mitral stenosis; further, out of 21 cases of dilatation of the pulmonary artery examined by Newton Pitt[4] in the post-mortem records of Guy's Hospital 19 were associated with mitral stenosis, and only two with chronic lung affections. The difficulties in the way of a clear investigation of the heart sounds in our case, owing to the emphysema and the adventitious sounds of chronic bronchitis, the duration and progressive character of the illness, which would presuppose an advanced mitral lesion, if one were present, and consequently loss of the characteristic thrill and presystolic murmur of mitral stenosis, together with the undoubted possibility and greater frequency of pulmonary incompetence as a complication of the latter lesion, show that there was good ground for the tentative diagnosis.

The aortic second sound was clear throughout. This fact is of interest, as a true pulmonary regurgitant murmur may be best heard in the aortic area and suggest aortic disease. Duckworth[5] has reported a case naturally diagnosed as aortic reflux in association with chronic bronchitis, in which a loud diastolic murmur was heard in the aortic region and down the sternum, but never over the third left costal cartilage. The murmur was heard best over the aortic area, but was found to be due to pulmonary incompetence associated with abnormality of the pulmonary valves (two and a rudimentary third). The pulse, however, though irregular, was never collapsing.

The existence of any abnormality in the pulmonary valve in our case was unsuspected during life, and the valve was probably competent until atheroma and dilatation of the pulmonary artery were produced by increasing resistance to the circulation through the lungs. During the last two years we have found in post-mortem work two other cases in which there were four pulmonary valves—one, that of a woman, aged 50 years, who died from pneumonia, and the other, that of a boy, aged 14 years, who died from pyæmia following acute osteo-myelitis—and in both of which the lesion was only discovered after death. The abnormality may, however, *per se* give rise to physical signs, as in the following case recorded by Warburton Begbie.[6] The patient, a young man, had been under observation on and off for some years. He suffered from shortness of breath, more especially on exertion, and was found to have a loud systolic murmur and thrill over the præcordium, but especially over the pulmonary artery, as well as a diastolic murmur limited to this spot. The fact that his right arm and pectoral muscles were congenitally malformed suggested a diagnosis of some congenital lesion of the pulmonary valve. The patient died from an accident. His heart was found to have four pulmonary cusps, the additional one being smaller than the others, as in our case; the other valves were normal.

As an abnormality in the number of the pulmonary cusps two are commoner than four (Dilg) and, apart from dilatation of the pulmonary artery, regurgitation is more commonly associated with the former (Newton Pitt). With dilatation, however, this statement does not hold. In the case which we describe the aortic orifice measured $3\frac{3}{8}$ inches and the pulmonary orifice $3\frac{1}{16}$ inches in circumference respectively. If we accept Peacock's figures—viz., $3\frac{3}{4}$ inches for the circumference of the aortic orifice and $3\frac{1}{16}$ inches for that of the pulmonary orifice—as the average measurements of normal orifices, it will be seen that in our case the aortic orifice is slightly smaller and the pulmonary orifice slightly larger than the average. As the aortic valve was quite healthy we may conclude that the heart was one in which the orifices were normally a little smaller than the average and that therefore there was a definite, though slight, dilatation of the pulmonary orifice. This point is of importance; for, as we have seen, the right anterior cusp was abnormally fenestrated below the lunula on the side next the additional cusp. With an undilated orifice it is conceivable that the extra cusp, when distended, served to close these fenestrations, but that with the gradual onset of the dilatation it would become more and more incompetent to do so. It seems to us that in this way an explanation can be given for the reflux, based only upon the lesions found after death. It is, however, most probable that during life the dilatation was even greater, but that, owing to the elasticity of the pulmonary artery not having been permanently injured by the increased tension, contraction took place after death, as has been suggested by Bryant to occur in cases of advanced mitral stenosis.

In both the other cases of four pulmonary valves which we have mentioned the cusps were fenestrated, but, as is usually the case, the fenestrations were at the margins of the lunula above the line of contact. In both cases there was a want of symmetry in the size of the corpora Arantii. In neither instance, however, were these bodies as large as in our case. We have already stated that the nodules were composed of pure fibrous tissue and we have expressed our opinion that they were hypertrophied corpora Arantii. To account for their occurrence we offer the following suggestions:—1. That they are the expression in the cusps themselves of a congenital excess of tissue shown to be already present in the formation of the valve by the presence of an additional cusp—truly additional in the sense that there is no marked diminution in the size of the other cusps. 2. That they are the outcome of prolonged strain upon the valves due to the increased tension in the pulmonary circulation and of the nature of a compensatory hypertrophy. As the fibres of each cusp pass from the lateral margins to the corpus Arantii it is at this point that the strain would be chiefly felt. 3. That the asymmetry is again of the nature of a compensatory hypertrophy, but serving the purpose of completing the closure of the cusps. For when four cusps are present they are, as a general rule, of unequal size and in consequence when they meet there is not such perfect and complete closure as in the case of three symmetrical cusps.

There is one further point of interest in the case and that is the paucity of clinical signs of tricuspid regurgitation with so dilated an orifice as was found post mortem.

We wish to express our most sincere thanks to Dr. Rolleston for his generous help and kind permission to publish the case, and to Mr. P. Lockhart Mummery for his kindness in drawing the specimen for us.

[1] Allbutt's System of Medicine, vol. vi., p. 3.
[2] Loc. cit.
[3] Guy's Hospital Reports, vol. lv.
[4] Loc. cit., p. 6.
[5] Transactions of the Clinical Society, vol. xxi., p. 18.
[6] Selected Works, New Sydenham Society, 1882, p. 109.

THE PREVENTION AND TREATMENT OF PULMONARY TUBERCULOSIS.—At the meeting of the Devon county council held on Sept. 25th the general purposes committee reported that it had received a number of replies from district councils regarding the proposal to constitute the whole county a hospital district with respect to phthisis. The majority of the replies were favourable to the proposal. It was decided that as soon as the opinions of all the councils had been ascertained the committee would submit a further report upon the matter.

Reviews and Notices of Books.

Manual of Ante-natal Pathology and Hygiene: The Fœtus. By J. W. BALLANTYNE, M.D., F.R.C.P., F.R.S.Edin., Lecturer on Midwifery and Gynæcology, Medical College for Women, Edinburgh; Lecturer on Ante-natal Pathology and Teratology in the University of Edinburgh; Assistant Physician, Royal Maternity Hospital, Edinburgh. With 14 Coloured Plates and 55 Figures. Edinburgh: William Green and Sons. 1902. Royal 8vo, pp. 527.

THE perusal of Dr. Ballantyne's book upon "Diseases of the Fœtus" had led us to hope that one day he would publish a work embodying all his researches in this most interesting field of science. It does not need the comprehensive list of his writings which accompanies the present volume to remind us of the author's peculiar fitness for this task. His reputation as an original worker and authority upon diseases of the fœtus is an international one, and it is a matter of congratulation that such an important work upon this subject should be from the pen of a British writer. Dr. Ballantyne's opportunities have been unique and he has not failed to make an excellent use of the large amount of material that he has had at his disposal. The present volume is a work of the most fascinating interest and our excuse for the comparative lateness of this review must be that the book is not one that can be fully appreciated without detailed study of its contents. The author well points out the great importance of the study of ante-natal pathology and the numerous relationships that it has to all the other medical sciences. There are few of us who really recognise the possibilities that lie in a further study of this subject. Pregnancy and the process of parturition are matters of such every-day experience that we are apt to forget the great physiological events that happen during the time, and the adaptation of the child to its new surroundings takes place, as a rule, so smoothly that we fail to realise the tremendous changes that are occurring in the organism during and immediately after birth, or, as Dr. Ballantyne terms it, the neo-natal period.

The present volume treats of Fœtal Physiology and Pathology alone, leaving Teratology and Morbid Heredity to be dealt with in a second part of the manual. The first six chapters are devoted to the relationship of ante-natal to post-natal and neo-natal pathology and the remaining chapters to the pathology and hygiene of the fœtus. Some of the most interesting sections in the work are those dealing with the physiology of the fœtus, including, as they do, a consideration of its nutrition, secretions, excretions, growth, movements, and sensations. These are followed by an account of various transmitted fœtal diseases, such as tubercle and syphilis. The problems concerned with the transmission of various poisons to the fœtus are next considered and then the author devotes a chapter to the ill-defined morbid states of the fœtus such as occur in maternal eclampsia, diabetes, leukæmia, and heart disease. The next six chapters are devoted to an account of the idiopathic diseases of the fœtus as they affect the various systems of its body. The last three chapters are those which will no doubt be read with most interest, including as they do an account of the diagnosis and therapeutics of fœtal diseases and the hygiene of fœtal life.

Even with the vast amount of knowledge, both practical and theoretical, that is included within this work we are obliged to confess that our hopes of being able to influence the future well-being of the yet unborn are still but small. Let us hope that the author's pious wish will be fulfilled and "that the twentieth century will witness amongst other good things a wonderful extension and development of beneficent ante-natal therapeutics." Meanwhile, we have no doubt that the appearance of this book will help to systematise and to encourage the researches that are being carried out in this most important branch of medical science by many workers in many countries.

Bacteriologische Diagnostik: zum Gebrauch in den Bacteriologischen Laboratorien und zum Selbstunterrichte; für Aerzte, Tierärzte, und Botaniker. (Bacteriological Diagnosis: for Use in Bacteriological Laboratories and for Private Study, for Physicians, Veterinary Surgeons, and Botanists.) VON TEISI MATZUSCHITA, Dr. Med. et Phil. With 17 Illustrations. Jena: Gustav Fischer. 1902. Pp. 690. Price, paper, 15 marks; cloth, 17 marks.

IT is to German technical literature that we most usually turn for full and detailed records of all hitherto ascertained facts in any branch of science. The records of our German brethren are proverbial for detail and scope and are characteristic of their capacity for taking pains. The work before us is a typical German production. It constitutes a well-indexed catalogue of bacteriological facts classified under suitable headings and should form a useful guide and book of reference for the student of bacteriology. The collocation of such a mass of data and the verification of a large portion thereof undertaken by the author bear witness to the painstaking industry and labour involved in such a work. In reviewing it we can only briefly outline the plan on which it is constructed. The total number of bacteria catalogued amounts to 1325. They are classified according to their most important characteristics of culture and growth. There are five main headings: (1) bacteria which liquefy gelatin; (2) bacteria which do not liquefy gelatin; (3) bacteria which do not grow on gelatin or under 20° C.; (4) important bacteria not yet accurately described in literature; and (5) important bacteria not yet grown on any culture media. Each of the first three groups is sub-divided into—(*a*) acrobic and facultative anaerobic and (*b*) anaerobic. Further subdivisions are made according to sporulation or non-sporulation; staining or not staining by Gram's method; and, finally, according to colouration in culture media. Against each bacterium are separate columns for motility, sporulation, need for oxygen, staining by Gram's method, liquefaction of 10 per cent. peptone-gelatin, coagulation of milk, gas-production in sugar bouillon, production of sulphuretted hydrogen, formation of indol and colouration, and the presence or absence of any of these qualities is signified by + or −. On the opposite page is a short account of the chief characteristics of form, growth, and the like of each bacterium. This catalogue is followed by a "key" of the most important bacteria arranged as streptococci, micrococci, sarcinæ, bacilli, vibriones, spirilla, and spirochætes.

The Artificial Feeding of Infants. By CHARLES F. JUDSON, M.D., and J. CLAXTON GITTINGS, M.D. Philadelphia: J. B. Lippincott Co. 1902. Pp. 368. Price 10*s.* 6*d.*

THE aim of the authors of this work has been to place before their readers an exhaustive account of the principles of the artificial feeding of infants as practised at the present day by the leading specialists. The book is a compilation rather than an original treatise and the bulk of the space is occupied by extensive quotations from the chief authorities on this subject; in fact, for the most part it is a critical review of the recent literature in this department of dietetics. Owing to its critical character we venture to predict that its sphere of usefulness will be found to consist in its merits as a book of reference rather than as a practical guide in the management and conduct of infant feeding.

The earlier chapters are confined to the consideration of the chemical and physical properties of human and

bovine milk and of the anatomy and physiology of the organs of digestion. Although for the most part these chapters deal with matter which is more or less familiar to all who keep themselves informed in the progress of infant feeding we quote a few passages which give information which is not readily accessible to those who rely only on the popular text-books on this subject. With reference to the gases of milk we are told that "the unpleasant taste of milk sterilised in open bottles depends on the disappearance of carbon dioxide and not on chemical changes. If carbon dioxide can be reincorporated artificially with such milk the pleasant taste will return." This statement, if true, at once suggests a new and practical application of the sparklet. On p. 56 H. D. Richmond's "Dairy Chemistry" is quoted, erroneously we believe, as the authority for the statement that the presence of citric or acetic acids in milk has not been definitely proved. Again, we are reminded that the ash of milk does not truly represent the mineral constituents since by oxidation the phosphorus, sulphur, and carbon in proteids are altered into phosphoric, sulphuric, and carbonic acids. With regard to the phosphorus organically combined present in cows' milk the amount is said to be inadequate for the metabolic requirements of infancy if the natural secretion is diluted with water. The larger proportion of this element is present in human milk in the form of nuclein and lecithin, and confers an advantage which cannot be otherwise supplied by any known expedient in artificial feeding. Bearing in mind also that the low percentage of phosphorus in organic combination contained in fresh cows' milk is exposed to a further reduction in the process of boiling, the authors hazard the suggestion that this may be the reason why infants fed for a long time on milk and milk preparations which have been subjected for a considerable period of time to excessive heat so frequently develop symptoms of rickets. With reference to digestion, many interesting points are raised on the question of gastric capacity, and attention is drawn to Pfaundler's important conclusions—namely, that (1) the stomachs of children who are breast-fed are smaller than those of artificially-fed infants; (2) that healthy infantile stomachs have a smaller real capacity than have those which are either organically or functionally diseased; and (3) that large stomachs have little elasticity and distensibility, whereas the reverse is the case with the small, healthy stomach. The authors bring this interesting section on digestion to a close in the following words: "Since our knowledge of the anatomy of the infant's stomach teaches us that this organ readily dilates, and since clinical experience has shown that overfeeding (too large and too frequent meals) is only too common an occurrence, especially among artificially-fed infants, the importance of carefully regulating the size and frequency of the meals cannot, in the light of our present knowledge, be over-estimated."

The central chapters of this work are devoted to a description of the modern methods of feeding and to the collateral subjects of weaning, care of the milk, sterilisation, pasteurisation, and kindred questions. Biedert's cream mixture, Heubner-Hoffmann-Soxhlet mixture, Backhaus and Gaertner's milk, and the American percentage feeding, together with a large number of less important methods, are fully described.

A separate chapter is devoted to the question of the weight and growth of the infant, and in the final chapters the authors proceed to construct a system of infant feeding founded on a critical consideration of the subject matter already dealt with. This method they consider is sufficiently broad in its scope to meet the widely varying needs of different infants. Stated concisely, the method suggested by the authors is founded on the principles of exact percentage feeding. The method, however, can be carried out at home without the aid of a specially organised milk laboratory. They suggest that the milk itself should be obtained in bottles which have been filled and sealed at the dairy, that as soon as the bottle is received it should be placed on ice until the day's food is to be prepared, and that all utensils employed in the modification should be scalded. They then proceed to give full directions how this modification is to be carried out. Without going into details we may mention that it depends on the method of employing top milk (the upper portions of milk which has been allowed to stand) for the preparation of the mixture. There is much to be said in favour of the method recommended by the authors, it is founded on scientific principles, it is fairly accurate, inexpensive, non-dependent on the services of the milk laboratory, and thus all mechanical interference with the milk and its vital properties is obviated. On the other hand, there are difficulties which at once suggest themselves in the general application of this method. It assumes, to say the least, a high degree of intelligence on the part of the nurse, for the method itself is a complicated one and the formulæ and tables are decidedly difficult to understand. Moreover, the process of preparing any mixture from top milk is tedious, and although probably accurate enough for practical purposes is nothing like so accurate, simple, or expeditious as the method of home modification which depends on simple dilution of milk and the addition of cream and sugar.

Although this little book cannot be commended for its systematic arrangement, and although in many respects it is too theoretical, we believe that it will be found of the greatest value to physicians who recognise in the scientific process of infant feeding a rational therapy of infantile disease.

Encyclopædia Medica. Volume XI.: Sciatica to Syncope. Edinburgh: W. Green and Sons. 1902. Pp. 530. Price 20s.

THIS volume includes several important subjects and affords some interesting reading. In point of bulk and usefulness the most important articles are perhaps those dealing with the spinal cord and spine by Mr. J. S. Collier and Mr. A. H. Tubby, and with the stomach by Dr. W. H. Allchin and Dr. Alexis Thomson. The medical section on the Spinal Cord treats the subject only from a general physiological and pathological point of view, the individual diseases being left for separate headings. Under the heading of "Surgical Affections of the Spine" Mr. Tubby naturally devotes several pages to spinal caries. Dr. Allchin's contribution on Diseases of the Stomach is exhaustive and thorough, though the arrangement of the subject is somewhat involved. In discussing gastric ulcer he inclines to the view that in chlorotic young women symptoms of gastric ulcer are often due to a simple erosion, or to only hypersensitiveness of the mucous membrane.

Under the heading of "Infantile Scurvy" Dr. A. E. Garrod argues in favour of the identity of the disease with scurvy in adults and whilst admitting its frequent association with a rachitic condition he follows Sir Thomas Barlow in separating it from rickets. In discussing the etiology of infantile scurvy he strongly favours the scorbutic theory. On the other hand, Dr. T. R. Bradshaw, in his short article on Scurvy in Adults, after briefly reviewing the scorbutic and toxic theories leaves the question *sub judice*.

Mr. W. Thelwall Thomas's article on Shock is very concise and satisfactory. Dr. J. B. Hyslop gives an interesting paper on Sleep, Normal and Morbid, illustrated with charts showing different depths of somnolence at different periods of sleep. In considering sleep in insanity he says: "It is just as important to keep a chart of the condition of sleep in the earlier stages of insanity as it is to record the temperature in conditions of bodily disease," and he gives

several examples of charts showing the condition of sleep in various forms of insanity.

Dr. Patrick Manson writes on Sleeping Sickness, or Negro Lethargy, a disease endemic in tropical West Africa. He points out that it is often associated with filaria perstans in individuals and that the two diseases have the same geographical distribution. The article on Small-pox is contributed by Dr. E. W. Hope, medical officer of health of Liverpool. The symptomatology of the disease is dismissed somewhat briefly. The article is well illustrated with reproductions of photographs of the eruption of the skin and there is a copious supply of temperature charts.

Considerations of space forbid mention of all the subjects treated in this volume, but, in conclusion, we may just refer to the article on the Scrotum and the Testicle by Mr. Jordan Lloyd, to that on Suppuration by Mr. G. L. Cheatle, and to a very instructive and suggestive article on Stammering by Dr. G. Cathcart.

LIBRARY TABLE.

Water and Its Purification. By SAMUEL RIDEAL, D.Sc. Lond. London: Crosby Lockwood and Sons. 1902. Second edition, revised and extended, with numerous Illustrations and Tables. Pp. 346. Price 9*s.*—We expressed a favourable opinion of the first edition (1896) of this work in THE LANCET of Feb. 27th, 1897, p. 599. The author has very properly added sections in the present edition on recent water epidemics and on the extremely important subject of sand filtration. In this connexion we may point out that a description of the works, filters, and distributing machinery of the London water companies will be found in the Report of THE LANCET Special Commission on the Metropolitan Water Supply. The book is of scientific as well as practical value, the last chapters being devoted to the analysis of water, both bacteriological and chemical, and to the significance of the results. We note that the few errors which we remarked in the former edition have been removed. Dr. Rideal emphasises the economy of soap that would result by the use of soft water instead of hard water. That may be so for manufacturing purposes, but for domestic purposes we doubt if any economy would result on account of the easy solubility of soap in soft water and the waste arising from this cause. The domestic soap bill, when rain water is used, is, as a rule, greater than when hard water is used. We are inclined to think that a little lime in water has its advantages—as in the case of making tea, for example; but no public supply company should, in our opinion, be allowed to pump such hard water into the mains as does the Kent Water Company. The mischief done to hot-water systems served by this company is enormous and may easily give rise to danger.

Public Abattoirs and Cattle Markets. From the German of OSCAR SCHWARZ, M.D., Director of the Public Slaughter-house and Cattle Yards, Stoep. Edited by G. T. HARRAP, A.M.I.C.E., M.I.M.E., &c., and LOUDON M. DOUGLAS, A.M.I.M.E., M.S.A. London: "Ice and Cold Storage" Publishing Company, Limited. Pp. 488 Price 10*s.* 6*d.*—It is not easy to assign to the author and editors of this work the responsibility which attaches to each of them in the production of the book. Mr. Harrap, it appears, in addition to the qualifications which we have set forth above, is also entitled to add to his name the letters "M.Mid.I. Brewing," and he is the editor of *Ice and Cold Storage*, which he describes as a "high-class illustrated monthly journal devoted to the interests of ice-making, cold storage, and refrigerating industries." In the preface to the book the editors say that the "assistance of experts" has been used to overcome the difficulties of the translation of Dr. Schwarz's book. They add that "it will doubtless be evident that the language in some instances is still open to improvement." We are in accord with the editors on this point, but we fail to see why they should not have exercised their editorial responsibility by correcting some at least of the most obvious peculiarities of diction. The German author must not be blamed for any faulty translation of his work and the editors have, they aver, added information to make the book more complete. They have not only done this, but in an important instance they venture to throw doubt on the correctness of Dr. Schwarz's teaching. An account is given of "the English patent method" of killing animals (p. 134). The author says that "in order to increase the value of the meat as regards nourishing properties, and thus make it richer in blood, they adopt the following method in England. The animal is first stupefied by being struck on the brain, and then the breast is filled with air by means of a pair of bellows whereupon the lungs fall together and death is caused by suffocation." "This is surely written under a misapprehension," say the editors, "as immediately after felling the animals are stabbed in the neck and the aorta or main blood-vessel of the heart severed, the blood instantly rushing out." As to what the facts really are the reader presumably having paid his money may take his choice The author displays that curious hatred of the Jews which is so common amongst the German people. He teaches that the Jewish method of killing "does not rest on any command of God" but that it rests alone on the authority of a number of learned Rabbis. "But, alas," he laments, "as long as the Government allow the Jews a separate building in which to kill according to their own ritual," so long will due supervision over their proceedings be necessary. We cannot agree with the editors that the attention which is being directed to the subject of public abattoirs is a sufficient reason for the publication of the book under review, although it contains matter which may prove of use to those interested in ice-making, cold storage, and the refrigerating interests, and to those who manufacture machines for those engaged in these sciences, arts, or trades.

Report of the Minister of Agriculture for the Dominion of Canada for the Year ended Oct. 31st, 1901.—The report of the Minister of Agriculture for Canada speaks very satisfactorily regarding the progress made in this department during the past year. Canada is eminently fitted for all agricultural pursuits and anything pertaining to the farming and breeding of stock is always looked upon in that country with favour. It it still considered a grievance that Canadian cattle imported to England cannot be taken inland alive and whilst on a visit to England this year the Hon. Mr. Sydney Fisher (the present Minister of Agriculture in Canada) had an interview with the Right Hon. Mr. Hanbury to endeavour to get this law repealed. It was pointed out that the contagious diseases which England was guarding against were not prevalent in Canada, but Mr. Hanbury emphatically declared that as long as he was Minister of Agriculture the Government would not admit any foreign or colonial cattle to free inland delivery in the United Kingdom. Regarding the annual and regular purchase in Canada of remounts for the imperial army Mr. Fisher had interviews with Lord Roberts and Lord Stanley and the result was very favourable, although up to the present no definite steps have been taken in this direction. The want of a national bacteriological laboratory for the preparation and control of serum and vaccines is commented upon and it is hoped that such will presently be established. In the appendix of the Report there are given detailed reports from the medical officers responsible for the administration of the human quarantine laws and also of the veterinary officers who inspect horses, cattle, pigs, sheep, and dogs, both before they are allowed to enter the country and when cases of infection are reported for investigation. These reports are

given in full and show well what careful precautions are taken in a modern and progressive country in order to guard the public health. The whole report occupies some 170 pages and can be purchased from the King's authorised printers at Ottawa, the price being only 15 cents.

The Prevention of Heart Disease in Rheumatic Children and Other Papers. By C. O. HAWTHORNE, M.D. Glasg., M.R.C.P. Lond. London: John Bale, Sons, and Danielsson, Limited. 1902. Pp. 28.—An interesting collection of seven miscellaneous papers, which have already appeared in THE LANCET and the London *Polyclinic*, has been reprinted in pamphlet form by Dr. C. O. Hawthorne. The first of the series, and that which gives the title to the pamphlet, is headed, "The Prevention of Heart Disease in Rheumatic Children." Dr. Hawthorne points out that rheumatic children as compared with adults are peculiarly prone to develop endocarditis and that in them rheumatism is apt to take active shape in forms that do not enforce the bodily rest by which endocarditis might possibly be avoided. From this it follows that the duty of the medical man who discovers the existence of rheumatism in any family under his professional care is not restricted to the treatment of such evidences as they severally arise, but he ought to warn the parents or guardians beforehand of the dangers attending apparently trivial illnesses, as they may affect the younger members of the household, and he ought to urge the absolute necessity of meeting these conditions by complete rest practised from the very onset of the indisposition. This is the more necessary because the parents of families with rheumatic proclivities do not usually realise either the real significance of many of the illnesses from which their children are apt to suffer or the serious risks of heart disease which these entail. In a description of two cases of intra-uterine amputations, illustrated by reproductions of photographs, Dr. Hawthorne says that there is abundant evidence that these deformities are produced by actual amputation of parts. What seems to happen is that in consequence of a defective formation of amniotic fluid, or from some other cause, the amnion in early embryonic life is not carried away from the newly-formed skin of the fœtus and adhesions form between the two structures. Subsequently, the cavity of the amnion becoming distended, these adhesions are rendered tense; and if one or more of them should pass round a limb this becomes strangled and may be gradually divided, the proximal part having perhaps first become atrophied in consequence of obstruction to the circulation. In some cases the strangling agent would appear to be the umbilical cord. One of the illustrations that accompany this article shows the handwriting of a person who had lost all four fingers (inner digits) by intra-uterine amputation but had retained a perfectly well-formed and undamaged thumb. The writing in question is quite legible and about as good as that of many of the humbler classes who have normal use of their hands and live by manual work. Sudden Greyness of the Hair and Arthritis accompanying Ophthalmia Neonatorum are two of the other subjects which are discussed.

JOURNALS AND MAGAZINES.

The Practitioner.—The September number of this journal provides some solid reading. A weighty article by Dr. A. C. Jordan on the Action of Certain Organic Acids gives an account of experiments made to ascertain the changes produced on the intestinal mucous membrane by bodies—chiefly organic acids—which may reach the intestines as food or drink or as the results of chemical action upon substances of food and upon liquids ingested. Dr. A. C. Houston contributes an article containing much information of practical value upon disinfection in schools. There is also a contribution from Mr. W. Arbuthnot Lane who vehemently upholds his well-known views on the operative treatment of simple fractures. Mr. Lane falls foul of Sir William Bennett, who is put up as a representative of the upholders of non-operative treatment and is accordingly heavily knocked down.

The Veterinarian.—The September number commences with an extract from an article on Hæmorrhagic Septicæmia of Cattle presented to the State Board of Minnesota by Dr. Wilson and Dr. Brimhall. The history and bacteriology are dealt with in detail, together with some of the symptoms, whilst other particulars are left for a future number. This is followed by a chapter on Castration and Oöphorectomy from Mr. Dollar's recent work on "Operative Technique" and a paper on Canine Distemper read by Mr. F. T. G. Hobday before the members of the National Veterinary Association. The latter deals principally with the application of the prophylactic treatment of the disease by various vaccines. The *Practitioner* is put under contribution for a further chapter on the Relation of Bovine Tuberculosis to Public Health by Dr. Salmon, chief of the United States Bureau of Animal Industry, and Professor Mettam's report on White Scour and Lung Disease in Calves is concluded. Another chapter upon Actinomycosis and Cirrhosis of the Liver in Cattle in New Zealand, by the Government bacteriologist, Mr. J. A. Gilruth, M.R.C.V.S., summarised from the annual report for 1901 occupies a further half dozen pages and some extracts under the heading of "The Month's Progress" bring the number to a conclusion.

Journal of Obstetrics and Gynæcology of the British Empire. Vol. I., January—June, 1902. Pp. 713. London: Baillière, Tindall, and Cox.—The appearance of the first volume of the *Journal of Obstetrics and Gynæcology of the British Empire* enables us to judge of the success attained by the editors in the realisation of their original aims. We can justly say that this has been most complete. The high standard set by the first few numbers has been more than kept up and the volume contains a number of most valuable original papers by British writers. Not only do these papers render the book one of permanent value, but the very copious abstracts of foreign papers will prove of great service to all workers in this field of medicine. A most admirable feature has been introduced in the March and subsequent numbers in the shape of an Index Obstetricus, in which the titles of all the most important papers that have appeared since the publication of the previous number are given. We can cordially congratulate the editors upon the result of their first half-year's work and we sincerely hope that as great a measure of success may attend their efforts in the future.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., with the coöperation of ADAM SEDGWICK, F.R.S.; W. F. R. WELDON, F.R.S.; and SYDNEY J. HICKSON, F.R.S. With Lithographic Plates and Engravings on wood. London: J. & A. Churchill. 8vo. New series, No. 182. Vol. XLVI. Part II. September, 1902. Pp. 231. Price 10*s.*—The articles contained in this part are: 1. Maturation of the Ovum in Echinus Esculentus, by Thomas H. Bryce, M.D. Edin., with three plates. Dr. Bryce states that so far as his observations go they support the idea of the nucleolus being a storehouse or laboratory of nuclein. He finds that the centrosome is composed of a special substance, the centro-plasma, which, according to the perfection of fixation and the manner of staining, presents different appearances which he describes. He then gives in detail the changes he has observed in the germinal vesicle preparatory to division. The division of the chromosomes is carefully followed out. An excellent

bibliography is appended to this article. 2. Studies on the Arachnid Entosternite, by R. I. Pocock, with two plates. The article deals with the structure of the entosternite in the xiphosuræ, scorpiones, pedipalpi, araneæ, and the so-called entosternite of the solifugæ; the comparative morphology of the entosternite, and finally gives the various theories that have been advanced by different authors in regard to its origin. 3. On the Morphology of the Cheilostomata, by Sidney F. Harmer, F.R.S., with four plates. In this article the author gives the conclusions at which he has arrived from the study of a very large number of species. It is well illustrated. 4. On the Development of Sagitta, with notes on the Anatomy of the Adult, by L. Doncaster, King's College, Cambridge, with three plates. The author states that the material for his work was obtained partly at Naples and partly in the "Pantano" at Faro, near Messina. The Pantano is a lagoon about half a mile in diameter connected with the Straits of Messina. In very warm weather one species of sagitta is very abundant and the ova developed with great rapidity, gastrulæ being found, for instance, at 7 A.M. and young sagittæ hatching out between 6 and 8 P.M.

New Inventions.

A NEW HEAD AND NECK BANDAGE AND AN IMPROVED SKEIN TRUSS.

THE advantage of a simple and easy and a distinctly set bandage for the head and neck is my excuse for bringing forward and describing this one. Place the end of the bandage on the side of the vertex, let it pass obliquely to the left side of the head behind the left ear to below the occiput; continue it round the *right* half of the neck and obliquely under the chin to the outside of the left ramus of

FIG. 1.

the jaw; thence carry the bandage obliquely up the left side of the face, in front of the left ear, to meet and overlie the initial end. This makes the first loop. The second loop is formed in the same way but on the other side. Thus, starting at the vertex the bandage is continued slantingly down the back part of the head, behind the right ear, to below the occiput, and after crossing the first loop there it passes round the *left* side of the neck, crosses the first loop again under the chin, and reaches the outside of the right ramus of the jaw; it is then carried obliquely up the right side of the face in front of the right ear to the vertex. This completes the second loop and finishes the bandage (see Fig 1). The turns are repeated to cover any dressings. The bandage is convenient and its method of adjustment is easy to remember. It is self-fixing, so the constant nipping up with pins is unnecessary. It avoids any circumferential turn round the neck and is therefore particularly comfortable for children. With this bandage it is quite feasible to keep dressings on for a week and more at a time without alteration, loosening, rubbing, or chafing of importance; besides, it permits of feeding without displacement. As a definite base to start from, extensions of the bandage can be made as they may occur to anyone so as to cover over any extra dressings, such, for instance, as under the opposite axillæ to cover the lower part of the nape of the neck, &c. It should be pointed out that the double loops are not simple figures of eight, because they cross and turn three times.

The knotted skein truss, as shown in Fig. 2, I have found

FIG. 2.

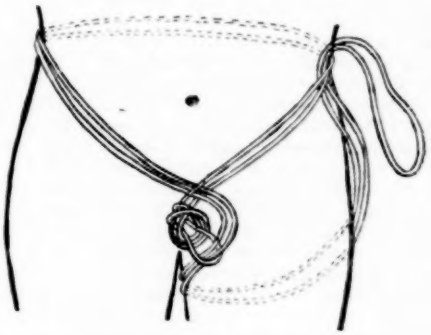


Diagram showing mode of application of woollen truss. In practice the knots are tightened up.

more reliable and safer to keep a hernia up than the ordinary wool one. In its design there are these two special points. A single knot is tied on one end of the two-strand skein; this is used as a pad over the hernial opening. The second point is that in tying the knot a small eye-loop is left below the knot, and this loop grips the other end of the skein as it passes through it. It is applied differently from the ordinary one. The skein is placed round the pelvis, but the shorter end, with the knot, is over the hernia, and the longer end passes over to the hernial side, goes through the larger loop above the knot, thence over the knot, and passes through the smaller eye-loop finally to turn round the thigh and be fastened off at the brim of the pelvis in the usual way.

Sloane-square Mansions, S.W. H. ELLIOT-BLAKE.

THE "LIFEGUARD" AUTOMATIC AIR-PURIFIER.

MR. W. L. CLARK (care of Messrs. Layton, Royle, and Co., 57, Chancery-lane, London, W.C.) has submitted to us a specimen of an apparatus entitled "The 'Lifeguard' automatic air-purifier." The apparatus consists of a spray-producer containing "eucalyptine," or any other fluid which may be preferred, and a pump which is fixed to a door. The pump is worked by the opening and shutting of the door and sends a current of air through the fluid in the tank, thus driving out a certain quantity of disinfectant. This system undoubtedly deodorises the air of closets and the like, but, of course, it would have no effect from the point of view of a microbicide, such as we are Mr. Clark, in the circular which he has forwarded to us, claims for it.

THE LANCET.

LONDON: SATURDAY, OCTOBER 4, 1902.

The Local Government Board and the Prevention of Small-pox.

IF history repeats itself we may look for recrudescence of small-pox in London in the coming winter and for its appearance in the provinces, may-be to a considerably greater extent than has been the case there during the epidemic of 1901-02 in the metropolis. We presume that it is in view of this contingency that the Local Government Board has now issued circular letters to local authorities in England and Wales concerned in dealing with epidemic small-pox, inclosing memoranda by the Board's medical officer. In one of these memoranda, on Revaccination, Mr. W. H. POWER sets out authoritatively and succinctly the advantages to be derived from revaccination and the desirability of the operation not being postponed until actual contact with small-pox infection has occurred. In this memorandum medical and sanitary officers and the medical profession generally are invited to urge upon parents and guardians the importance of having their children revaccinated in ordinary course at the age of 12 years or thereabouts and to emphasise the importance of persons beyond this age who have not yet been successfully revaccinated obtaining for themselves the additional protection which may be secured by this means.

With regard to the evidence of success of revaccination Mr. POWER observes:—

"As regards revaccinations to be paid for out of the rates public vaccinators should realise that those cases only are to be regarded as successful in which either vesicles, normal or modified, or papules surrounded by areolæ have resulted. A revaccination which does not (the interval since previous vaccination being more than 10 years) produce this amount of local effect should be considered as unsuccessful owing to want of activity of the lymph used or other defect in the performance of the operation; it is not to be regarded as showing that the subject is immune against small-pox."

It is comparatively rare, we believe, for the first revaccination of an adult not to produce any vesiculation if performed with lymph the efficacy of which has been proved in primary vaccination. Where local papules alone result from a first revaccination it is generally a good practice to make a further attempt after an interval of a few weeks or months.

In issuing this memorandum to boards of guardians the Local Government Board urges "more than usual diligence" on the part of vaccination officers at the present time in securing the primary vaccination of children. It is pointed out also that the public vaccinators "are authorised to afford revaccination with glycerinated calf lymph gratuitously to all persons over 10 years of age who have not previously been successfully vaccinated or revaccinated within a period of 10 years," and that the Board "having now on hand a considerable stock of glycerinated calf lymph are better able in the present than they may be in the future to supply public vaccinators with approved lymph in the desired quantities." The question of making Government lymph available to medical men who are not public vaccinators is not dealt with in this circular, but it is to be hoped that the matter will not be lost sight of in the new vaccination legislation which will be necessary on the expiration next year of the Vaccination Act of 1898. The need of comprehensive amendment of the law relating to the prevention of small-pox and vaccination is, indeed, abundantly shown by the circulars in question. So long as legislation fails to provide a system of revaccination comparable to that established for the primary vaccination of infants, no amount of exposition of its advantages will ensure that the bulk of the population is protected by revaccination. Until a generation arises in which revaccination has been practised as a matter of routine at school age or later we must expect epidemics of small-pox. At present when an outbreak of small-pox occurs the most important means of checking the spread of the disease are in the hands of local authorities who have no other public health functions whatever and who often fail to realise the large responsibility which rests upon them. All that the Local Government Board appears able to do, under present conditions, is to lay down a necessarily cumbrous programme by which the local vaccination authority is to be brought into relation with the local sanitary authority. It is, doubtless, desirable that the duties and inter-relations of these respective bodies should from time to time be reviewed and defined by the department concerned, but it may be hoped that the Government will soon proceed to revision of the question on altogether broader lines.

The Local Government Board's circular letter to the sanitary authorities is also important in its way. It is mainly concerned with the question of providing isolation hospital accommodation in readiness for outbreaks of small-pox. All sanitary authorities are strongly urged to make such provision, smaller districts being advised to combine for the purpose. Excellent work in effecting such combinations has lately been carried out by the medical officers of health of several counties—Lancashire and Staffordshire, for example—while in Essex Dr. J. C. THRESH has with a similar object encouraged provision by various authorities of temporary tent hospitals for small-pox. The Board repeats its warning against placing the small-pox hospitals near to populous neighbourhoods. Recent experience at Glasgow has afforded fresh evidence of the necessity of this precaution. With regard to "quarantine" the circular letter observes: "The Board are advised that, under ordinary circumstances, the quarantining at their homes of inmates of dwellings invaded by small-pox is not necessary in districts in which sanitary matters are properly administered and vaccination and revaccination are efficiently carried out." It is sufficient, in the opinion of the Board, on a dwelling becoming invaded by small-pox, that the actual patients should be at once removed to hospital, the other inmates of the house immediately revaccinated or vaccinated, while the dwelling and all articles in it that have been exposed

to infection, including the clothes worn by the other inmates, must be properly disinfected. There is no material advantage to be gained by keeping the other inmates at home. They are not likely to infect other people unless they themselves develop small-pox; and all that is required, the Board points out, is "to keep such persons under medical observation for a fortnight, and particularly to examine them carefully day by day towards the end of the second week from their exposure to infection, in order to ascertain whether any of them are developing small-pox. If none of them do so by the beginning of the third week from exposure, the re-vaccination (or vaccination) to which they were at once submitted on the occurrence of the first case in the invaded house should secure them from attack of the disease."

Prolonged interference with the occupation and liberty of the healthy subject in the name of public health is an evil which has very few mitigations, and it is satisfactory to note that the Board will only sanction expenditure on "quarantine" in exceptional circumstances and on the advice of the medical officer of health in each instance.

The Sanitary Congress at Manchester.

THERE is a disposition in some quarters to speak of scientific and semi-scientific congresses in terms of ridicule and to designate them picnics or gatherings of cranks and amateurs who are desirous of bringing themselves into prominence by the promulgation of ill-digested schemes and impossible proposals. This description cannot be justly applied even by the most cynical to the congresses which from time to time during the past 25 years have been organised by the Sanitary Institute. They are attended by the principal public health officials and by representatives of most of the sanitary authorities in the British Isles, and the prominence given to their proceedings has unquestionably contributed very largely to the diffusion of a knowledge of sanitary matters among the people generally. The Institute was established in 1876 and the first congress was held during the following year in Leamington under the presidency of Dr. (afterwards Sir) BENJAMIN WARD RICHARDSON. This year the nineteenth congress assembled in Manchester and was presided over by Earl EGERTON of TATTON, when the proceedings were of marked public interest, most of the subjects which came under discussion being exactly those upon which thinking men require precise information in order that our sanitary officials may have an enlightened public opinion to judge their work.

In connexion with the congress conferences of municipal representatives, of sanitary officers, of ladies interested in hygiene, and of those concerned with the hygiene of schools were held, as has been the custom on former occasions. At the conference of medical officers of health Dr. EDWARD C. SEATON, in conjunction with Mr. WILLIAM WELCH, the chairman of the sanitary committee of the Surrey County Council, urged the desirability of a more prompt issue of the annual reports of medical officers of health and suggested that quarterly reports might be substituted for the annual reports required by the Local Government Board. There can be no doubt that the usefulness of a report is very much diminished when it refers to events that have occurred at a distant date. In large towns, where a staff of clerks is employed in the sanitary department, there ought not to be any difficulty in bringing out the report of a medical officer of health at a much earlier period of the year than is at present the case. We are sure that these reports, many of which are of the first value to the district dealt with, would receive closer attention from persons of local importance if placed in their hands while the events described were fresh of occurrence. It is questionable whether there would be any real gain by the adoption of Dr. SEATON'S second proposal; one annual summary from the central bureau appears to us to meet the case very well. In the section relating to Sanitary Science and Preventive Medicine, which was presided over by Sir JAMES CRICHTON BROWNE, Dr. CHRISTOPHER CHILDS dealt with the question of enteric fever amongst armies in the field from a civilian's point of view and deplored the fact that sufficient steps were not taken by the War Office at the outset of the South African War to secure a complete system of sanitary organisation. In the course of the discussion which followed the reading of Dr. CHILDS'S paper Colonel J. LANE NOTTER, late Professor of Military Hygiene in the Army Medical School at Netley, insisted that considering the very special difficulties which surrounded the army in South Africa everything that could be done to prevent the spread of enteric fever among the troops was done, and he bore testimony to the readiness with which both Lord ROBERTS and Lord KITCHENER acted upon the advice of the army medical officers with regard to sanitary measures. This was a subject obscured by many unsubstantiated rumours and it was well that it should be discussed in public. The same comment holds good with regard to the question of the adulteration of beer, concerning which contradictory reports have been rife ever since the outbreak of arsenical poisoning in Salford and Manchester in the year 1900. The story of this outbreak was told by Professor SHERIDAN DELÉPINE in his Presidential Address in the section of Physics, Chemistry, and Biology with an attractiveness which it is difficult to imagine possible in connexion with such a subject, and as the details of the investigations which demonstrated the presence of arsenic not only in glucose but in sooty deposits on roofs and elsewhere were unfolded it was abundantly apparent how helpless those sanitary authorities must be who cannot claim such assistance as Professor DELÉPINE was able to afford.

We make no attempt even to mention the titles of the numerous papers which were read and discussed during the three days on which the members of the congress met. Many were of a very high order and will doubtless bear good fruit. The very remarkable and suggestive lecture delivered by Mr. NAPIER SHAW, F.R.S., to the full Congress merits, however, more extended comment. Although the address primarily dealt with the diminution of fogs Mr. SHAW actually concerned himself with the question of smoke which he regarded as the particular point to which special attention should be directed. He approached the subject by considering smoke as a species of domestic or industrial refuse which has to be removed somehow or other,

regarding the fact that sewage and other refuse naturally go down whereas smoke in the first instance goes upwards as a comparatively trivial distinction. The gravity of the smoke nuisance was well shown by comparing the average amount of sunshine recorded during the 20 years 1881–1900 month by month in London with that recorded during the same period in the southern districts of England. Briefly, the comparison represented a loss to London of one-sixth of its sunshine in summer and one half in winter. The difference in the figures for summer and winter is to be found to a great extent in the fact that there are fewer domestic fires in the summer months. It has only been fully recognised during the past few years that factory chimneys are not entirely responsible for the smoky atmosphere of our large towns and it is to be regretted that the Public Health Act, 1875, should have perpetuated the definition of a smoke nuisance as given in the Sanitary Act of 1866, where it is described as "any chimney (not being the chimney of a private dwelling-house) sending forth black smoke in such quantity as to be a nuisance." But Mr. SHAW, while pointing out how unscientific is the distinction thus drawn between a factory chimney and the chimney of a dwelling-house, does not propose that they should be treated alike: he suggests that owners of houses should have their assessments reduced upon those properties which are so arranged as not to add to the pollution of the atmosphere by smoke. This idea of reward for good behaviour is not altogether a novel one, for the principle has already been conceded in the case of a certain class of tenement houses, the inhabited house duty chargeable on such premises being remitted on production of a certificate from the medical officer of health that the houses in question are in a good sanitary condition. At present there is no encouragement held out to builders to provide means of delivering air from houses free from smoke but rather the reverse, for an increased outlay upon appliances frequently means an increased assessment and higher rates. The remedy proposed by Mr. SHAW for the diminution of domestic smoke was not the abolition of the open fire or the treatment of the smoke in the individual chimney, but that chimneys should be reduced in number by leading the flues from blocks of houses to one common stack in which by electricity or by some other means the air passing up could be purified from smoke. As an incidental recommendation of this system there would be provided a persistent and calculable method of ventilation that would enable hot-water or steam-pipes to be used much more generally than at present. We hope that Mr. SHAW'S able and highly interesting address will lead to practical trial of his suggestions at an early date.

The Introductory Addresses.

WITH the opening of the winter session at the London and provincial Schools of Medicine the students have been welcomed back to their respective hospitals and fortified against the arduous duties which lie before them by the delivery of addresses which contain much excellent and some familiar advice. Indeed, as Dr. T. T. WHIPHAM reminds us in his address to the students at St. George's Hospital. "As each 1st of October comes round and one wades through page upon page of ponderous advice which is so lavishly proffered to the would-be student of medicine in the various institutions where introductory addresses survive, one is lost in wonder as to what kind of a man he would be who had assimilated all the precepts laid down for him, and what must be his power of assimilation supposing he had succeeded in doing so." Nevertheless, in view of the interest which at the present time attaches to all questions which concern education, both in its widest and its narrowest purview, an examination of the suggestions and advice which such competent and experienced teachers as those whose addresses to students we publish this week have to offer on the subject of medical education will well repay consideration.

Sir DYCE DUCKWORTH, addressing the students at the Owens College, Manchester, urges on his audience the paramount importance of a full preliminary training in the *literæ humaniores* as the best and most efficient means of securing that mental balance and acumen which are necessary for the making of a successful physician. "I believe," says Sir DYCE DUCKWORTH, "that the humanities not only soften manners and promote culture, but constitute an educational instrument which other studies cannot furnish, that they supply the key which opens the way to excellence in all other pursuits and secure those mental qualities which are likely to prove a saving grace against the pitfalls and the problems of professional life." Sir H. G. HOWSE, speaking in the same vein at the Sheffield Medical School, remarks: "It may be possible in the future for students to enter the medical profession without any previous training in Latin or Greek. If any future modification of the regulations of the General Medical Council or of the colleges should render this possible I advise students not to avail themselves of it." Without claiming that a university education is the only means of obtaining a knowledge of the humanities Sir DYCE DUCKWORTH clearly indicates that of all means it is the most effective and practical and he would like to see the universities chiefly concerned in the training of the best candidates for each profession and would like to see their degrees regarded as honours, not necessarily carrying with them State qualifications to practise. Sir DYCE DUCKWORTH and Sir H. G. HOWSE are of one mind with regard to the value of a study of botany as a means of training the faculty of observation, and Dr. WHIPHAM, also insisting on the importance of accurate observation, quoted Sir WILLIAM GULL'S famous aphorism—namely, "that in medicine we make more mistakes by not looking than by not knowing." Sir DYCE DUCKWORTH strongly urges students before they settle down in practice to betake themselves to other scenes of medical teaching and to study the methods of other clinics, and this advice loses none of its force by being also given at Leeds by Mr. MAYO ROBSON who admits that he looks on the experience he has gained in foreign schools and hospitals as among his most treasured possessions. Pertinent as this advice most undoubtedly is in the case of students obtaining their education at the various provincial schools of medicine, it has, too, its applications to those students who are studying at our London hospitals. Of all professions the medical is perhaps

the most conservative and tradition-bound. That indefinable spirit of superiority which pervades certain teaching departments would doubtless receive a most beneficial chastening if both teachers and students followed the excellent advice tendered to them by more than one lecturer to forsake for a period the "wealth of allurements" which their own school undoubtedly possesses and to see "what is done and who does it in other clinics." The criticisms which have recently been directed against the methods of elementary and technical education in this country undoubtedly apply just as forcibly to the system of teaching pursued at our medical schools, and several of the introductory addresses refer to reforms already effected or contemplated in the immediate future. At University College Hospital, thanks to the munificence of Sir BLUNDELL MAPLE, there has now been provided every modern facility for conducting clinical teaching on the most approved and scientific basis, and at St. George's Hospital Dr. WHIPHAM refers to the establishment of a photo-micrographical laboratory, to a gift of a complete apparatus for Roentgen ray photography, and to the completion of a department for the practical instruction of candidates seeking a diploma in public health. At other hospitals equally important and necessary steps have been taken to keep abreast of the times and to afford every opportunity for clinical observation and scientific research work.

The authorities of the three associated colleges of the Victoria University—namely, those of Liverpool, Manchester, and Leeds—are apparently greatly exercised in mind in anticipation of important developments in their institutions consequent on the contemplated secession of the Liverpool College and its establishment as an independent teaching university. Both Sir DYCE DUCKWORTH and Mr. MAYO ROBSON naturally refer to these proposed changes and the former in his address remarks that he has no apprehension for the future welfare of any one of the three universities if the proposed disintegration take effect; indeed, he believes that the special interests of each one of these great centres of population would best be studied by the establishment of independent universities, each under the ægis of its own *genius loci*. In considering the advisability of taking the proposed step he reminded his audience that "no new university can by any possibility be made a copy of an older one, for truly a *genius loci* attaches to the character and quality of each." In contradistinction to this view of Sir DYCE DUCKWORTH with respect to these proposed changes Mr. MAYO ROBSON hopes that the Privy Council will not give its sanction to the ambition of Liverpool and Manchester, for the Victoria University with its three colleges has done excellent work and has established a great reputation which will be hard to maintain if the proposed alterations are carried into effect. University College Hospital, or, rather, its medical school, finds itself in a somewhat similar position of uncertainty with regard to its future association with University College, London, and Mr. PERCY FLEMMING, in his introductory address, referring to the birth of that new university (which Sir DYCE DUCKWORTH somewhat quaintly described as "a curious but potent academic conglomeration which in its new form is slowly emerging in a corner of the Imperial Institute in London"), remarks that the attendants of the newly-born infant seem to consider that its powers of assimilation are unequal to the task of absorbing in its system University College in its entirety and that the particular part of the college which in their opinion is likely to disagree is the faculty of medicine. If the absorption of University College by the new University of London necessitates the dismemberment of the faculty of medicine, what, asks Mr. FLEMMING, will the faculty of medicine possess? what will be the position of the medical school? Perhaps, in the words of Sir DYCE DUCKWORTH, "the school will find salvation in its *genius loci*."

Annotations.

"Ne quid nimis."

THE ELECTION OF A DIRECT REPRESENTATIVE FOR ENGLAND AND WALES ON THE GENERAL MEDICAL COUNCIL.

THE re-election of Sir Victor Horsley as a Direct Representative of the medical profession for England and Wales on the General Medical Council by the decisive majority of 4567 is a result that we regard as distinctly satisfactory. Our views on the subject of Mr. Joseph Smith's candidature were clearly stated in a leading article in THE LANCET of Sept. 13th, p. 753, and we are glad to see that these views were substantially held by our readers. We do not for a moment doubt that Mr. Joseph Smith would prove to be a capable representative, and, to a certain extent, the facts that he is in complete sympathy with Mr. George Brown and Mr. George Jackson and is also a general practitioner would, in other circumstances, have recommended his candidature. It is good that the Direct Representatives of the profession, being so few in number, should, as far as possible, be in complete accord, that they may bring to bear upon the body of the Council a vote that has the additional force of unanimity; but, although Mr. Joseph Smith was able to poll 3105 votes, which shows that our opinion is not shared by a certain proportion of the medical profession, we still consider that his candidature was inadvisable and ill-timed. Although Sir Victor Horsley is a distinguished consultant, circumstances have given him a complete familiarity with all the questions which are of particular moment to the general practitioner; while the work that he has done in connexion with the British Medical Association and, previously, as Chairman of the Medical Defence Union, has given him an insight into the practical questions affecting the professional life of his colleagues which no other of the Direct Representatives has had an opportunity of obtaining. Sir Victor Horsley's work upon the Council should certainly not yet be cut short. We have previously said in commenting upon this election that, if Mr. Joseph Smith persisted in his intention to go to the poll, whichever candidate proved to be the successful one would have a weak position, but the result of the voting has shown such predominance in favour of Sir Victor Horsley that he can hardly be said to have lost anything by having his position assailed.

THE ALLEGED MEDICINAL PROPERTIES OF THE HUSK OF THE COFFEE BEAN.

ABOUT a year ago Dr. L. Restrepo of Medellin, the capital of the department of Antioquia, in the Republic of Colombia, South America, convinced himself that the husk of the coffee bean was of great utility in the treatment of several

diseases and that in malaria it sometimes succeeded where quinine had failed. Having regard, on the one hand, to the immense importance of such a discovery, if it were verified, and, on the other hand, to the remoteness of the Republic of Colombia from the acknowledged centres of medical activity, some credit is, we think, due to the British Legation in Bogotà, the capital of the country, for having forwarded copious details of Dr. Restrepo's observations to the proper authorities in London—of course, without anything of the nature of official endorsement. Dr. Restrepo at first used an infusion made with 45 grammes of crushed coffee (in the husk) and 400 grammes (about 14 fluid ounces) of water. This was boiled for five minutes, strained, and taken in one day in six doses. With this medicine he successfully treated five patients of whom three suffered respectively from intermittent malarial fever, chronic malarial fever, and pernicious fever, and two suffered from enteric colic or chronic dysentery of malarial origin. Before taking this infusion these patients "had all been declared fatal cases, given up by well-known doctors of good reputation." He afterwards made the infusion with 30 grammes of coffee husk alone in place of 45 grammes of crushed coffee in the husk, the other details of preparation and the dose being as before. With this he says that he "treated hundreds of cases, not one patient has died, and a cure has resulted in every instance." For administration in influenza he dissolved in the decoction of coffee husk an amount of tartar emetic which, according to the account sent us, is so heroic that there is probably some mistake in the description.

THE DEATH OF M. EMILE ZOLA.

IT has been said with much truth that no danger is brought thoroughly home to people's minds until a great man has fallen a victim to it. The truth has been exemplified in a most tragic way by the death of M. Zola who in the full vigour and enjoyment of health was poisoned in his bedroom by the emanations arising from a defective stove. It is hardly within our scope as medical journalists to attempt to give a sketch of M. Zola's wonderful career as a journalist and writer. As is well known, his was the life, full of romance and incident, of a fearless author who wrote with terrible directness. Repugnant as many of his works may be considered —for he did not scruple to depict squalor of the worst degree—it is by no means certain whether, after all, he did not play the part of a social sanitarian by exciting such a feeling of loathsomeness and disgust as to induce a determination in the minds of many to make life and its conditions more wholesome and more pure. M Zola's courageous and self-sacrificing attitude in the Dreyfus case showed at any rate that he was a humanitarian in the highest sense, anxious that the truth should be brought to light and that justice should be done for the accused. We are more concerned, however, with the circumstances of the painful incident which has brought a remarkable career to such a terribly tragic close. It is the irony of things that the incident which cut short M. Zola's life would have formed the foundation of just the sort of a scheme he was fond of employing out of the fertile resources of his highly imaginative brain to remove a given actor in any one of his sensational dramas. The accounts bearing upon the actual cause of M. Zola's death are not clear in some particulars, though there is no doubt that primarily a faulty stove was the means of poisoning him. The exact kind of stove is not described and the evidence of his wife would seem to indicate that the chimney had been blocked, or partially blocked, in which case death might have ensued from the inhalation of carbonic acid gas or carbon monoxide or, as is most probably the case, of both gases. At the necropsy it is reported that, on the one hand, it was concluded that death was due to carbonic oxide poisoning, and on the other to carbonic acid. The fact that two pet dogs sleeping in the same room survived favours the view that carbonic acid gas was the cause of death, for it is well known that animals may be kept in an atmosphere of carbonic acid gas for weeks without suffering much inconvenience. Again, Madame Zola was brought back to consciousness after dogged perseverance with restorative measures by her medical attendants, and it is rarely that individuals who have inhaled a large quantity of carbon monoxide can effectually throw off the powerfully poisonous gas and be restored. Moreover, M. Zola seems to have been able to get up but to have fallen on the floor, in which position he was found dead, Madame Zola having fainted and therefore being unable to call for assistance. In some accounts it is stated that the complexion of the deceased presented that pink tinge characteristic of carbon monoxide poisoning. It is possible that the level of the bed was above the zone below which the poisonous gases had accumulated. Carbonic acid gas is just half as heavy again as air, while carbon monoxide has the same density. The sad occurrence draws attention once again in a very prominent manner to the importance of insisting that domestic heating appliances, and especially those employed in sleeping apartments, should be constantly examined and kept in a satisfactory working condition. It seems odd that having once noticed that there was something wrong with the stove no step was taken to put the fire right out before M. Zola and his wife retired to bed, although any defect in the working conditions of a close stove may not always necessarily be apparent. We have recorded in our columns, and especially in letters from our Paris correspondent, so many disasters due to the close stove that the wonder is that it has not long ago been abolished. Much ridicule has been leveled against the people of this country for their deeply-rooted preference for the open fire, but at least one very important thing may be said in favour of the system, and that is that it can easily be seen whether there is anything wrong with it or not. The fact of the fire being shut up and so hidden from view has undoubtedly accounted for the deaths of many unsuspecting victims.

THE ETIOLOGY OF ENTERIC FEVER IN PEACE AND WAR.

ONE of the most important contributions that have for a long time been made to the study of the causation of enteric fever in armies was brought forward at the late meeting of the British Medical Association at Manchester. The paper in question, which was written by Major R. H. Firth, R.A.M.C., and Major W. H. Horrocks, R.A.M.C., is based upon a series of scientific observations and experiments carried out by them at the Hygienic Laboratory of the Army Medical School at Netley and is entitled "An Inquiry into the Influence of Soil, Fabrics, and Flies in the Dissemination of Enteric Infection." We need not weary our readers by any repetition of what we have so frequently said about the persistent prevalence from year to year of this fever in India, where it may be regarded as endemic, or again refer to the deplorable loss of life and inefficiency to which it gives rise in almost every campaign that is undertaken, and notably so in the case of the late war in South Africa and in the Spanish-American war of 1898. In the views which we have from time to time put forward with regard to the nature, causation, and dissemination of this disease we have always taken care to guard our readers against adopting the assumption that, because enteric fever is so commonly a water-borne disease, water is the sole and exclusive vehicle for its

dissemination and that by destroying the infectious power of the intestinal discharges the disease may be surely extinguished. It must, we think, be admitted that the exclusive advocacy of such views as those to which we are referring has, on the whole, had a detrimental influence on the progress of sanitary science. Although water is a very common medium for the conveyance of Eberth's pathogenic bacillus, there are, nevertheless, other sources of contagion which play a part, and sometimes a very prominent part, in the spread of this disease; and so far from the intestinal discharges being the only agents concerned in the spread of the disease they are but one of a series of agents. It is now recognised that instead of a patient ceasing to be a source of danger after his restoration to seeming health he may carry about in himself—in the urinary and biliary secretions, for example—the seeds of infection for months or even years. The results obtained by the investigations of Major Firth and Major Horrocks into the vitality of the typhoid bacillus in relation to soil and the transference of the bacilli through the agency of dust, by flies, and by clothing are, scientifically speaking, highly interesting and suggestive, and, what is more important, have a direct practical bearing on army sanitation. Taken in connexion with the report of the Commission appointed by the American Government to inquire into the causes of enteric fever in the United States Army ample material is afforded for reconsidering the whole question of the prevalence of typhoid fever in armies, with the view of seeing what can be done to prevent the recurrence in future of disastrous outbreaks of this fever in forces operating in the field. It is confessedly a large, important, and very difficult subject to deal with, but that is the very reason why the sanitary organisation for an army should be undertaken deliberately in time of peace. It has to be borne in mind that it is the function of the army sanitarian to determine what are the modifiable conditions in war in order to adjust his measures within practicable limits to the best advantage. Opportunities will occur of returning to this subject which can only now and within our present limits be briefly referred to; but we may safely say that the nation will never rest satisfied with the idea, however eminent may be the rank of him who originated it, that army sanitation on field service is a "fad." The duty of the War Office authorities at the present time seems to be a very plain one—namely, to commence some inquiry as to what is to be the future sanitary organisation for the army.

THE METROPOLITAN WATER-SUPPLY.

THE report of the condition of the metropolitan water-supply during the month of July has been recently published. The Thames river water was in good condition during the whole of the month and the height of its level was throughout below the average summer level, its highest point having been three inches and the lowest point 10 inches below the normal. The average daily supply delivered from the Thames was 137,715,155 gallons, from the Lee 40,955,785 gallons, from "springs" and wells 61,639,138 gallons, and from the Hampstead and Highgate ponds 160,361 gallons. The average total daily supply was 240,470,439 gallons for a population estimated at 6,383,914, and this represents a daily consumption per head of 37·67 gallons. With the exception of the Southwark and Vauxhall all the companies delivered a smaller quantity of water per head to their customers than they did during the corresponding month of the previous year. The companies which do not profess to give a constant service to all their clients are the Kent, the Lambeth, the New River, and the Southwark and Vauxhall, and these undertakings now give a constant supply respectively to 97·7, 76·9, 95·1, and 93·1 of their customers. The Water Examiner reports that "in the cases of the Southwark, Lambeth, and East London companies' waters minute amounts of suspended matters, consisting chiefly of rust-coloured particles, were observed." The proportions of brown tint observed in samples of the water judged by the standard in use varied from two to 24 degrees, which, it will be noticed, is a wide range. "The water of the Lambeth company exhibited the deepest average tint of brown." Samples of the water distributed on July 7th were collected and "fully examined" by Dr. T. E. Thorpe, F.R.S., analyst to the Local Government Board. It was found that the average amount of organic impurity in the waters so examined was represented numerically as follows: Kent Company 8, New River Company 14, West Middlesex and Southwark and Vauxhall Companies 38, East London Company 39, Grand Junction and Lambeth Companies 40, and Chelsea Company 41. The most important results of Dr. Thorpe's examination are given in the appended table which shows the results of his analyses expressed in parts per 100,000.

Company.	Organic carbon.	Organic nitrogen.	Nitrogen as nitrates and nitrites.	Total combined nitrogen.
Chelsea	0·216	0·025	0·135	0·160
West Middlesex	0·199	0·025	0·121	0·146
Southwark and Vauxhall ...	0·204	0·021	0·117	0·138
Grand Junction	0·209	0·026	0·154	0·180
Lambeth	0·214	0·023	0·145	0·168
New River	0·067	0·013	0·168	0·181
East London	0·208	0·025	0·329	0·354
Kent	0·038	0·007	0·482	0·499

THE DISTRIBUTION OF PLAGUE.

THE Director-General of the Sanitary Department of Egypt reports that for the week ending Sept. 14th there were 2 new cases admitted, both at Alexandria. There was 1 death. The sanitary measures carried out were were as follows: 6593 rooms were disinfected and 268 were lime-washed; 245 sacks of effects were disinfected and 7687 sacks of rubbish were burned. The number of rats killed and burned was 127. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Sept. 26th states that for the week ending Sept. 25th there were 5 cases of plague and 4 deaths.

AN UNWARRANTABLE DANGER.

THE grave responsibility that rests upon those who receive the sick in nursing homes and kindred institutions is strikingly illustrated by the facts brought out in a claim made by Sir Robert Harvey of Trenowth against the matron of a home for invalids in a seaside town. The claim was settled out of court, the defendant paying the amount of damages claimed and also the costs. Her action in so doing depreciates the value of her stated defence in which she directly denied the accusations of negligence, the denial involving an absolute contradiction of statements as to the facts maintained by the plaintiff. The circumstances of the case may be briefly told. The plaintiff's son, suffering from German measles, was admitted into the defendant's home. On the day of his admission the defendant's nephew, staying in the house, was found to have diphtheria. The plaintiff's son was in the house a fortnight and on returning to his own home was seized within a week with diphtheria, from which he died. The plaintiff maintained that the defendant did not inform him of the presence of diphtheria in

her house, and also that she did not have the case of diphtheria removed, and did not disinfect her house. Although to this she offered a direct contradiction as to fact, stating that her nephew was immediately removed and her house disinfected, yet a suspicion that a reasonable amount of care was not exercised can hardly fail to rest upon her. No doubt there may have been hours, perhaps days, during which the diagnosis of diphtheria was in doubt. During such a period, however, the strictest isolation of the "suspect" should, of course, have been practised and a knowledge of the possible risk conveyed to the friends of other inmates. Persons who keep houses to which the sick may repair for treatment or for convalescence must at least make certain that their guests do not acquire fresh disorders.

SMALL-POX AND THE WEATHER.

IN a report on the outbreak of small-pox in the metropolitan borough of Poplar during 1901 and 1902, Mr. F. W. Alexander, the medical officer of health, argues that there is a connexion between the incidence of the disease and certain meteorological conditions. With this object in view he has prepared a chart containing five curves showing simultaneously (1) the weekly sum of hours during which the sun is above the horizon; (2) the weekly sum of hours of registered sunshine; (3) the mean weekly temperature of the air; (4) the mean weekly degree of humidity; and (5) the number of cases of small-pox notified week by week in the administrative county of London from July 14th, 1901, to August 30th, 1902. According to this chart the climatic conditions under which small-pox was most prevalent appear to be: (1) absence of sunshine; (2) presence of the sun above the horizon for less than 80 hours per week—i.e., less than 11 hours per day; (3) temperature of the air below 50° F.; and (4) humidity above 75 (the saturation-point being taken as 100).

THE FOOD AT HOTELS, RESTAURANTS, AND EATING-HOUSES.

NOT infrequently persons find it somewhat difficult to account for the onset of poisonous symptoms unless it be traced to what they have eaten, leaving out the question of indulgence both in food and drink beyond the line of sobriety. And not uncommonly this kind of distress supervenes after dining even wisely, as far as it is possible to do so, at an hotel or restaurant. Something has disagreed with them, some one item in the course has proved unwholesome, and speculation in the case of a dinner of several dishes may turn on a fairly wide choice of things. Was it the *hors d'œuvre*, or the oysters, or the fish, or the game, or the lobster sauce or other appetising adjunct? The kitchen authorities alone know under what conditions the food was obtained and prepared. The diner has no guarantee whatever except the reputation of the house that the lobster or the shrimps in the sauce were not tinned, and the liability of tinned foods to be poisonous is well known. Again, what, if any, are the hygienic provisions of the kitchen? Is there any possibility of sewage contamination? A number of similar pertinent questions arise, to which, however, it is difficult to obtain an answer until a serious case of poisoning occurs. Yet thousands of people never consider the matter until some acute gastric symptom affects them and their confidence in the hotel or restaurant cuisine is rudely disturbed. The fact is that under the existing *régime* trust has to be reposed blindly in the management as to whether proper regard is given to the preparation of food and to the environment of its cooking and storage. At present there is no way by which any sense of security can be felt that such is the case, and it seems to us that a system of control giving this security should be established. To some extent our air-supply and our water-supply are guarded, and why should not some sort of watch be kept on the food supplied by the caterers at hotels, restaurants, and other places?

THE MEDICAL SOCIETY OF LONDON.

THE one hundred and thirtieth session of the Medical Society of London will commence with a general meeting to be held at the rooms of the society in Chandos-street, W., on Monday, Oct. 13th, at 8 P.M. After this meeting the presidential address will be delivered by Mr. A. Pearce Gould. The Lettsomian Lectures of the society will be delivered on Feb. 16th and March 2nd and 16th, 1903, by Dr. H. Radcliffe Crocker. The Annual Oration will be delivered on May 18th, 1903, by Sir William H. Bennett. The anniversary dinner of the society will take place at the Whitehall Rooms, Hôtel Métropole, on Saturday, March 7th, 1903, at 7 P.M. Among the interesting discussions announced for the forthcoming session will be one on the surgical treatment of hæmatemesis, to be opened by Mr. Mayo Robson; one on the treatment of epilepsy, to be opened by Dr. J. S. Risien Russell and Sir Victor Horsley; and one on the treatment of rectal cancer, to be opened by Mr. W. Watson Cheyne and Mr. Herbert F. Waterhouse.

MALARIA IN CEYLON.

DR. ALBERT J. CHALMERS, registrar to the Ceylon Medical College, has made a preliminary report on the prevalence of malaria in Ceylon, with a view to its prevention. The report contains much instructive and useful information and deals with some points which have hitherto hardly obtained the attention which they deserve. The paper contains three addenda, of which the first is devoted to an interesting theory to explain how man and the anopheles originally became infected with the malarial parasite, and the second gives a copy of a pamphlet on malaria which has been distributed to the various stations in Ceylon. The theory of the origin of the disease which is propounded by Mr. A. Perry, principal medical officer and inspector of hospitals, Ceylon, raises two points which are not without practical importance. They are: (1) Is it possible that the infection in man can take place by some other means than through the mosquito? and (2) If this be not possible how did the cycle of the life of the parasite start? In his account of the incidence of malaria in Ceylon Dr. Chalmers first shows that the disorder is a powerful factor in the disease- and death-rates of the island and he proceeds to show that there is a definite relationship between the prevalence of the distemper and the amount of the rainfall. In reference to the causal relation existing between the climatic conditions and the incidence of the malady the writer says: "There appears no doubt that the reason why so few, sometimes no, anopheles are seen in the dry season for months together—e.g., in Accra and Kumassi, West Africa—and then the sudden appearance of these insects in numbers is due to their hybernation in dark protected spots. They come out again in the wet season, as this is the time *par excellence* when they find the pools of water with suitable algæ for propagating their species and, in my opinion, this is the reason of the relationship between malaria and the rainfall." Dr. Chalmers states that at the date at which he wrote his report[1] he had not had sufficient opportunity of studying the anopheletes and their haunts in Ceylon to make an exhaustive statement on them, but that he had found the anopheles Rossii, an anopheles which resembled ("but not quite exactly") the anopheles vanus, and

[1] The report is dated June 10th, 1901. The Colonial Office cannot be congratulated on the promptness of its publication.

a third which he calls anopheles X, in which the costal margin of the wing was "decorated with two white spots." It is incidentally mentioned that there had lately been a severe outbreak of malarial fever at Katancudy during which Dr. Hallock, who was medical officer there, acted with great discernment and by promptly cleansing the village made at once a marked effect on the disease. Dr. Chalmers gives a brief account of the dwellings and of the habits of the different peoples who live in Ceylon —of the Europeans, the Burghers, and the Sinhalese, of the Tamils, the Mahomedans, and the coolies. The Hindoos, the Buddhists, and the Mahomedans are particularly liable to infection from mosquitoes, not only because they wear little clothing, but because their religious observances entail their attendance at temples and at mosques during the night. Rice fields form a suitable breeding ground for the anopheles, and so well is this fact recognised that an Italian law passed as long ago as 1866 makes provision for regulations in regard to the distance from dwellings at which the culture of rice is permissible. In regard to Ceylon it is thought that such restrictions could not properly be made, but it is suggested that the building of new houses near to existing rice fields might advantageously be forbidden. The importance of educating the people as to the cause of malaria is insisted upon in the report, and it is suggested that the best way to accomplish this is to begin in the schools, and that as apothecaries are often sent to remote stations on the occurrence of a severe outbreak of malaria an opportunity should be given to them to learn how to take blood-films and how to recognise the anopheles and its larvæ. Such a course of study, it is noted, might advantageously be given at the Ceylon Medical College. The most interesting points which the report shows may be briefly summarised as follows: (1) malaria at the present time is epidemic in Ceylon only in certain localities; (2) the island contains many anopheletes and the conditions which exist there are peculiarly suitable for their development; (3) a large proportion of the existing anopheletes are not infected with the malarial poison; and (4) coolies affected with malaria are constantly being introduced from India to Ceylon. There is, therefore, a possibility that malaria may become more prevalent if these facts are not realised. The mode of spread of the distemper will be this. Coolies suffering from the disease will go to a part of the country which contains healthy anopheletes. The anopheletes by sucking the blood of the infected coolies will become affected and in their turn will infect men previously free from the malady. Dr. Chalmers is justified in his belief that "anyone suffering from malarial fever in a country in which the anopheles abounds is a danger to public health." In the report this teaching is given as a personal opinion, but it is a fact about which there can be no shadow of a doubt, and Dr. Chalmers rightly founds his recommendations as to prophylaxis on the certainty of its truth.

MYELOPATHIC ALBUMOSURIA.

IN another column we publish a paper by Dr. T. R. Bradshaw on "Myelopathic Albumosuria." This is a term that will not be found in even the most modern works on medicine, but will doubtless in due time find its way into the "Nomenclature of Diseases" issued under the authority of the Royal College of Physicians of London. Dr. Bradshaw rightly points out that as the boundaries of medical science are extended it is recognised that morbid conditions apparently diverse are essentially the same, but that far more frequent is the separation of morbid processes which have previously been regarded as identical. He then proceeds to draw attention to the disease known as "osteomalacia," or "mollities ossium." With the advance of clinical and pathological observation it came to be recognised that cases of softening of the bone in adults differed materially from one another, and two groups were respectively named "osteomalacia" and "multiple myeloma." It was then further demonstrated that all cases of multiple myeloma did not possess the same features, some presenting the phenomena of albumosuria, whilst in others this symptom was absent. To the cases in which albumose is found in the urine and in which there is an affection of the marrow Dr. Bradshaw proposes to give the name of "myelopathic albumosuria." It was at one time supposed that multiple myeloma was always attended by albumosuria, the apparent exceptions being attributed to errors of observation. This view, however, has been disproved, and we think the term proposed by Dr. Bradshaw an accurate and useful one. A good description of the symptoms observed in these cases is given and the author also makes some interesting remarks as regards the characters of the proteid in the urine, the exact nature of which has not yet been settled although several hypotheses have been brought forward. Dr. Bradshaw considers that the albumose is probably produced in connexion with the new growths in bones. How this can happen is at present a matter of pure conjecture, but it might conceivably take place through the action of a ferment.

AFTER THE HOLIDAYS.

To those who have recently returned from a holiday at the sea-side or in the country it is a common disappointment that, instead of enjoying the perfect health which they confidently expected, some ailment seizes them soon after the return home. The father of a family has, perhaps with difficulty, maintained his *ménage* for a month away from the town where he dwells and coming home again has to call in the family medical attendant to see the children's throats. The hard-worked business or professional man after three weeks' holiday comes back and develops a crop of boils or an attack of eczema. The maiden lady who has enjoyed her annual change finds herself in bed at home stricken with one or other of the minor ailments to which she is prone. These experiences are disappointing enough to those who are their subjects. They are interesting facts from the medical point of view. With regard to one class of ailment that thus frequently ensues upon a return to town from the sea-side or the country we commented last year.[1] We showed then that as regards various forms of sore-throat the dust-laden atmosphere of large towns and of wood-paved streets supplies a ready explanation of the damage arising in delicate air-passages recently accustomed to only the purest atmosphere. No such obvious explanation is forthcoming for other forms of complaint which are so often found to affect people who have recently, as they supposed, restored their physical state to the highest level. Moreover, in spite of the disappointing illness which attacks them so soon after their return home, there is no doubt that they have in reality gained physically by their holiday. With many persons there seems to be an overpowering element of temporary disability in any change of environment and habit. That man is a creature of habit is a commonplace, but it is none the less a strict truth so far as his physical welfare is concerned in very many instances. Many people must have time to acclimatise before they are at their proper level of health, even though they have changed from a less to a more healthy condition and even though they have just returned home after the healthiest of holidays. This need for

[1] THE LANCET, Sept. 28th, 1901, p. 880.

acclimatisation is not commonly reckoned with, and the man or woman fresh from a holiday plunges with renewed energy and the fullest confidence *in medias res*. *He* flings himself into the occupations and anxieties of his business or profession, *she* slips into the hundred tasks of a busy domestic existence, forgetful of the sudden transition from the complete leisure of the holiday to this turmoil of the town. Thus any baneful effect of changed environment is helped by the sudden over-exercise of mind and body recently accustomed to only the easiest and most pleasant exertions. We believe that many a disappointment, transient, perhaps, but temporarily at any rate often keen enough, might be averted if people so contrived their return from a holiday that a few days' interval was allowed before the real work of life was resumed. In these few days the system is, so to speak, comfortably switched on to the old lines again and the human engine is permitted to run the better for the acquired and properly stored vigour of the holiday.

DINNER TO MR. ALFRED WILLETT.

MR. ALFRED WILLETT, who has recently retired from the post of surgeon to St. Bartholomew's Hospital, was on the evening of Tuesday, Sept. 30th, presented with his bust and entertained at dinner by his old house surgeons. During Mr. Willett's term of office 44 men have held the post of house surgeon and of these 28 attended to do honour to their old chief. Of the others two are dead, some are in India, some are in South Africa, and the rest were prevented from coming owing to professional engagements. The bust is the work of Mr. Hope Pinker and is an admirable likeness. The presentation was made on behalf of his colleagues by Dr. W. S. A. Griffith who was in the chair. Mr. Willett, in acknowledging the gift, expressed his pleasure in being once more in the midst of his house surgeons and said that he was rightly proud of the positions which they now occupied. No man could have had more loyal assistants and his relations all the years during which he had possessed a house surgeon had been of the most pleasant description. "I should like," adds a correspondent who was present, "to say that everybody who had the privilege of working for Mr. Willett always felt that he was working for a great man. He was always just and always generous. He never tolerated slackness, but although he expected and obtained hard work no one was more ready to give a man credit for that which he did or tried to do." The arrangements for the dinner and the organisation of the gathering were excellently carried out by Mr. W. G. Spencer, Mr. F. C. Wallis, and Mr. H. J. Paterson. The dinner was held at the Imperial Restaurant.

THE INDIAN MEDICAL SERVICE: ITS PAST AND PRESENT HISTORY

THE *Asiatic Quarterly Review* published this month contains an elaborate and interesting article by Surgeon-General W. B. Beatson, I.M.S. (retired), late Deputy Surgeon-General, Lahore Division, on the "Indian Medical Service, Past and Present." It is the purpose of the article to trace out in continuity the evolution of the present medical service in India and the sundry and manifold changes through which it has passed from a very elementary and initial stage to that of its latest development and organisation with the prestige which rightly belongs to it. Surgeon-General Beatson has had recourse to the records left by early writers and explorers, because, as he rightly says, the originators of the existing Government medical service in India must be sought for among the English adventurers who during the latter part of the sixteenth century followed in the footsteps of European traders who were the geographical discoverers of the period. The romantic stories and glowing accounts of the riches of the "gorgeous East" brought home by travellers who followed in the footsteps of the Portuguese first attracted notice in this country and led to ambassadors being sent to Akbar, the greatest and most enlightened of the Moghul Emperors of India. Between the years 1610 and 1620 both English and Dutch traders were permitted to establish factories at Surat, very much to the disgust of the Portuguese who had been settled on the western coast of India for nearly a century. Surgeon-General Beatson's article being mainly historical and extending to 48 pages does not readily lend itself to an analysis and summary statement, but it will suffice to say that those who are desirous of ascertaining the very influential part which members of the medical profession have played in the history of our rule in India will thank us for calling attention to it.

HONG-KONG COLLEGE OF MEDICINE FOR CHINESE.

A MEETING of the General Council and students of this college was held on August 28th in the Legislative Council Chamber, when Sir W. J. Gascoigne, K.C.M.G., officer administering the Government, presented the diploma of the college to five students who had completed the curriculum of study and passed the professional examinations. Among those present were the Hon. F. H. May, C.M.G. (rector of the college), Dr. Francis W. Clark (dean), Dr. J. C. Thomson (honorary secretary), Dr. Ho Kai, C.M.G., Dr. R. McLean Gibson, Dr. Hunter, Dr. G. H. Bateson Wright, Major M. J. Whitty, R.A.M.C., and Major S. F. Clark, R.A.M.C. The names of the licentiates, according to the *Hong Kong Daily Press*, were Mr. Tee Han Kee, Mr. Lau Lai, Mr. Ho Ko Tsun, Mr. Lee Yin Sze, and Mr. Chan Fai Kwong. In presenting the students to Sir W. J. Gascoigne Dr. Francis Clark said that the fact of Chinamen attending a course of training in Western medicine was a proof of the foresight of the founders of the college, of whom Dr. Patrick Manson, C.M.G., was one. The diploma was in the following form:—

We, the Dean, Lecturers, and Examiners of the Hong-Kong College of Medicine for Chinese, hereby declare that ———, having attended courses of lectures during a period of five years in the various departments of professional study required by the College, has been examined and duly satisfied the Examiners in each of those subjects; that he is qualified to practise Medicine, Surgery, and Midwifery; and that by authority of the Court of the College he is hereby granted the title of Licentiate in Medicine and Surgery of the Hong-Kong College of Medicine for Chinese. [L.M.S.H.]

In witness whereof we have hereto set our signatures on this 28th day of August in the year Nineteen Hundred and Two, being the year of the Chinese Cycle Yam Yan.

THE PATHOLOGICAL ANATOMY OF TUBERCULOUS AND OTHER FORMS OF MENINGITIS.

IN a communication published in *Le Progrès Médical* of August 23rd last Dr. Faure and Dr. Laignet-Lavastine give an account of the pathological changes observed microscopically in 17 cases of tuberculous and other forms of meningitis examined at Professor Ballet's laboratory. The cases included 13 of tuberculous meningitis, two cases of meningitis due to the pneumococcus, and one each of meningitis due to the enterococcus and Eberth's bacillus. The pathological changes observed may be summarised as follows. Apart from the appearances of perivascular exudation of serum and leucocytes into the meshes of the pia-arachnoid membranes, which changes could also be traced along the perivascular channels of the blood-vessels penetrating the cortex, the cortical nerve-cells themselves were full of powdery materials or grains which produced a "dusty" appearance. Many of the cells appeared to be globular or swollen. The cell-nuclei often looked as though they were dried up or "calcined," while the protoplasmic prolongations (dendrites) were pale and the outlines of several of the

cell-bodies seemed to be eroded and roughened. These lesions were especially marked in cases of tuberculous meningitis of the classical form, but they were slight and inconspicuous in those cases where the disease had run a very rapid course of from 24 to 48 hours.

ALCOHOL-CONTAMINATED AIR.

THERE can be little doubt that the air of distilleries, wine and spirit vaults, and drinking saloons must at times contain appreciable amounts of alcohol and the question has arisen as to whether air containing traces of alcohol would be prejudicial to health. Our attention has been drawn by a correspondent to one instance in which definite steps were taken to ascertain whether the air of an office in a wine and spirit warehouse contained alcohol vapour. It is well known, of course, that where wines and spirits are stored there is invariably a sort of alcoholic smell, and it has been stated that a walk through the cellars at the London Docks, where large quantities of spirits are stored, has at first a peculiarly stimulating effect followed by depression and headache and nausea. In the same way the stranger on his first visit to the great sherry bodegas in the south of Spain experiences at first a decided sense of exhilaration with quickening of the pulse, followed by a narcotic effect, a feeling of languor, and headache. In the great brandy stores at Cognac, again, to some people the air is sickening. It might be naturally expected that the more volatile constituents of wines and spirits would be the first to evaporate into the air and possibly the volatile ethers would thus prevail. We have heard it said that the effect of inhaling the air of the sherry vaults is more marked than when other spirituous liquids are kept in the store. It is, of course, well known that sherry is a highly ethereal wine. There would, therefore, appear to be some ground for concluding that when air is impregnated with the volatile vapours of spirits or wines it has a marked effect upon health. Whether this effect would be pronounced or not upon those inhaling the air day by day does not appear to have been ascertained with certainty. It is probable, however, that at any rate some slight deterioration of health would take place. It is pretty commonly asserted that publicans and barmaids experience ill-effects from the constant inhalation of an alcohol-contaminated air, but their environment, of course, provides a combination of unhealthy factors. According to an examination made of the air of a distillery it would appear that no less than an ounce of proof spirit or half an ounce of absolute alcohol may be present in five cubic feet of air. It is obvious from this result, we think, that a very appreciable amount of alcohol would be inhaled during a stay, say, of eight hours in such air. And since the alcohol by the medium of the lungs would rapidly gain access to the circulation the conclusion must be in favour of the view that such air would in the long run be detrimental to health, and therefore that in such a case special arrangements for particularly efficient ventilation are indicated.

THE PRESENCE OF SPERMATOZOA IN HYDROCELE FLUID.

EXAMINATION of the cells contained in pathological fluids (cytology) is a means of investigation only recently introduced into clinical medicine and one much more extensively employed in France than in this country. In the *Bulletin de la Société Médicale des Hôpitaux de Lyon* for June M. F. Barjon and M. A. Cade have published a curious fact which their investigations into the cytology of hydrocele fluid has brought to light—the frequent presence of spermatozoa. As very few spermatozoa may be present careful search with an immersion objective should be made. Out of eight cases of ordinary (idiopathic) hydrocele spermatozoa were found in five, whereas they were not found in four cases of symptomatic hydrocele, due to orchitis, tuberculosis, and syphilis. In three of the cases of ordinary hydrocele puncture had previously been performed. In none of these were spermatozoa found, but they were found in the remaining five cases in which puncture had not been performed. In these latter cases the hydrocele was carefully incised under anæsthesia, and the spermatozoa could not have been introduced from a wound of the testicle or epididymis. Spermatozoa were not found in the other three cases, probably because they were removed at the previous operations. The spermatozoa found were dead and showed histological changes indicative of prolonged sojourn in the hydrocele fluid. Sometimes the tail was shortened, truncated, or even absent; sometimes the head was deformed. Frequently endothelial cells had acted as phagocytes on the spermatozoa, as on the red blood corpuscles. The presence of the spermatozoa has an important bearing on the difficult question of the pathogenesis of hydrocele. The old hypothesis, originated by Morgagni and adopted by Geuzmer and Volkmann, that hydrocele originates in the accidental rupture of little cysts of the testicle or epididymis into the tunica vaginalis is supported. Further, Panas and other surgeons have found slight lesions on the surface of the testicle and epididymis, which, perhaps, were the result of cicatrisation of ruptured cysts.

CHOLERA IN EGYPT.

THE Director-General of the Sanitary Department of Egypt states that throughout Egypt during the week ending Sept. 15th, 9466 cases of cholera were reported. 4681 of these persons were found dead out of hospital and 3597 deaths took place in hospital. During the week 120 cases occurred in Cairo and 300 in Alexandria, against 131 in Cairo and 133 in Alexandria during the previous week. Up to the present 1557 towns, villages, and ezbehs have been notified as infected throughout Upper and Lower Egypt.

THE annual meeting of the Incorporated Society of Medical Officers of Health will be held at the Hotel Russell at 5 P.M. on Friday, Oct. 10th. The president of the society, Dr. J. Spottiswoode Cameron, will deliver an address, entitled, "Sanitary Progress during the Last 25 Years—and in the Next." The annual dinner of the society will be held at the Hotel Russell at 7.30 P.M., under the presidency of Dr. Cameron. Communications with regard to the dinner should be made to Dr. Henry Kenwood, 9, Adelphi-terrace, London, W.C.

THE annual medical service at St. Paul's Cathedral organised by the Guild of St. Luke will take place this year on Oct. 22nd, at 7.30 P.M., when the Bishop of Kensington will preach the sermon. A choir of over 200 voices provided by the London Gregorian Choral Association will render the music. Many members of the medical profession have intimated their intention of attending in academic robes. Admission to the space under the dome will be by tickets only.

THE Huxley Lecture was delivered at the Charing Cross Hospital Medical School by Professor W. H. Welch, M.D., of the Johns Hopkins University, Baltimore, on Wednesday, October 1st, at 4 P.M. The full text of Professor Welch's interesting lecture will be published in our columns next week.

Mr. Rickard W. Lloyd, President of the West London Medico-Chirurgical Society, will give the opening address on the Field of View of the Anæsthetist at the meeting of the

society to be held to-day (Friday) at 8.30 P.M. in the rooms of the society, West London Hospital.

THE first meeting of the 1902-03 session of the Hunterian Society will be held on Wednesday, Oct. 8th, at 8.30 P.M. Dr. Seymour J. Sharkey will deliver the first Hunterian lecture on the Cardiac Muscle from a Clinical Point of View.

THE RECENT ELECTION OF A DIRECT REPRESENTATIVE ON THE GENERAL MEDICAL COUNCIL.

WE have received for publication from Sir Victor Horsley the following letter with regard to his re-election addressed

To the Registered Medical Practitioners of England and Wales.

LADIES AND GENTLEMEN,—I beg to thank you sincerely for the honour you have conferred upon me by my re-election to the General Medical Council. I appreciate very highly this renewed expression of confidence on the part of my professional colleagues and hope that it may be justified by my work in the future.

Cavendish-square, W., Sept. 29th, 1902. VICTOR HORSLEY.

The following letter has also been addressed to us :—

To the Editors of THE LANCET.

SIRS,—I shall feel obliged if you will kindly allow me through your columns to thank the 3105 registered practitioners who recorded their votes in my favour at the recent election of a Direct Representative. Although unsuccessful, the fact that I polled such a large number of votes—far beyond the number I anticipated—is exceedingly gratifying, and shows that there is a widespread feeling in the profession in favour of the principle so strongly advocated by the late Sir Andrew Clark, that the Direct Representatives should be drawn from the ranks of those who are in general practice. As I consented only at the last moment to allow myself to be nominated as a candidate, there was no time to organise an election committee or to prosecute any canvass for votes. Had I had time to do so (probably in view of the large number of votes I received) the result might have been different. Further, I had the whole medical press against me, including the *British Medical Journal*, which, I maintain, should have remained neutral. I am, however, encouraged by the gratifying reception my candidature has met with at the recent election to hope that I may yet have the honour to represent my fellow practitioners in the General Medical Council.

I am, Sirs, your obedient servant,

JOSEPH SMITH.

15, Bath-road, Bedford-park, Chiswick, Oct. 1st, 1902.

OPENING OF THE NEW NATIONAL SERUM INSTITUTE FOR DENMARK.

THE Danes have been able to effect in a country with a population of two and a half millions what we cannot manage to carry out in England with all our wealth and population. Perhaps when the population is small individual lives are of greater value than they are to us with our teeming millions. In 1894 Professor Salomonsen, the Director of the University Laboratory of Medical Bacteriology, appreciating the great possibilities of the serum treatment, made a request to the Minister of Ecclesiastical and Educational Affairs for a sum of £550 with which to carry on the manufacture of anti-diphtheria serum in the university. In 1895-96 the grant was made to the laboratory which, in addition to carrying out experimental work in connexion with serum therapeutics, undertook (1) to keep in view, as far as possible, during the carrying out of these experiments the production of large quantities of anti-diphtheritic serum; (2) to ensure the thorough training of young medical men in the general technique of the manufacture of the different anti-sera; and (3) to dispense free of cost to such hospitals and medical men as might require it all the anti-diphtheritic serum which under these conditions the laboratory was able to produce. The work done under these conditions was so satisfactory and the results obtained so good that those in authority saw that not only as a serum manufactory but also as a school some more permanent provision would have to be made, and at length Professor Salomonsen, having obtained a site from the Minister of War on the Island of Amager just outside the old fortifications of Copenhagen, has been able to plan and to erect a most convenient institute which, under the control of the State, is still to be kept in connexion with the teaching department of the university, Dr. Madsen being appointed resident director under the general supervision of Professor Salomonsen. Here, in a most convenient building, are rooms for the preparation of media, incubating rooms, bacteriological, chemical, and other research laboratories, dark rooms, cool rooms, directors' rooms, and a splendid suite of residential apartments. Excellent accommodation is provided for large and small animals, and there are even a pond for aquarium work, a capital exercising ground for the horses, and a series of rooms and apparatus for the preliminary treatment of horses, the separation of serum, &c., whilst sufficient land remains for the erection of any further buildings that are likely to be required for some time to come.

In the opening address delivered on Sept. 9th by Professor Salomonsen to a large audience of scientific men and State officials great stress was laid by him upon the necessity of keeping this institution in close touch with the university and especially in connexion with the teaching of general pathology which promises to play so important a part in the development of medical science.

At a reception and banquet given by Professor Salomonsen on the day of the opening and at a dinner given by Dr. Madsen on the following day the State and the University were most heartily congratulated on the success of the movement and Professor Salomonsen and Dr. Madsen on the convenience of the laboratories and the perfection of the general and special arrangements. At these meetings the State was represented by the Minister for War and the Minister for Ecclesiastical and Educational Affairs; Germany by Professor Ehrlich, Professor Weigert, Dr. Morganroth, and Dr. Lassar; Norway by Dr. Armaur Hansen and Dr. Malm and by the medical officers of health of Christiania; Sweden by Professor Svantr Arrhenius and Professor Retzius; and Great Britain by Professor G. Sims Woodhead, Dr. Dean, Dr. W. Bulloch, Dr. W. A. Turner, and Miss Fitzgerald of Oxford, who is at present working in the institute. There were numerous other representatives from various towns in Scandinavia.

In an exceedingly well got up volume (in English, by the way) are printed as a kind of "Festschrift" contributions from the University Laboratory for Medical Bacteriology to celebrate the Inauguration of the State Serum Institute, edited by Carl Julius Salomonsen. As these are of permanent interest it may be well to give a list of them: (1) The Rise and Growth of the State Serum Institute, by the editor; (2) General Pathology as a University Subject, by the editor; (3) Physical Chemistry Applied to Toxins and Antitoxins, by Svantr Arrhenius and Thorald Madsen; (4) The Molecular Weight of Diphtheria Toxin, by Svantr Arrhenius and Thorald Madsen; (5) Studies on Diphtheria Toxin, by Georges Dreyer and Thorald Madsen; (6) the Fate of Typhoid and Cholera Agglutinins during Active and Passive Communication, by Thorald Madsen and Axel Jorgensen; (7) Coli Agglutinins and their Course of Formation, by Ernest Levin; (8) the Decrease of Antibodies on the Organism Indicated by a Formula, by Thorald Madsen; (9) the Unreliability of the Neutral-red Reaction as generally employed for the Differentiation of Bacillus Typhosus and Bacillus Coli, by Mabel Purefoy Fitzgerald (Oxford) and Georges Dreyer; (10) Histogenesis of the Nodules produced by Subcutaneous Infection Saccharomyces Neoformans (Sanfelice), by Vilhelm Jensen; (11) A New Apparatus for Rapid Delivery of a given Quantity of Fluid, by Georges Dreyer; and (12) a Chemotactic Experiment, by the editor.

The representatives from Great Britain were greatly impressed by the evidence of scientific activity afforded, not only in the Serum Institute, but in the numerous other well-equipped laboratories of the university, veterinary, and agricultural high schools. The *camaraderie* and good feeling

manifested throughout the whole proceedings were particularly noticeable and were certainly greatly appreciated by the British repre-entatives, especially as marked by a reference to the marriage of Dr. Bulloch to Miss Anna Molboe of Copenhagen which had been celebrated the day before the opening of the institute.

SANITATION AT LEICESTER.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

The New Crematorium.

THE town of Leicester has always taken a leading part in the agitation against vaccination. One of the principal arguments brought forward against vaccination is that though small-pox is undoubtedly less prevalent than it used to be before vaccination was rendered compulsory this is due to improved sanitation and not to vaccination. In the face of such an argument it is but natural to expect that the very greatest care would be bestowed on all sanitary measures so that proof might be forthcoming to show that small-pox can be kept in abeyance even without vaccination. Therefore, the anti-vaccination agitation should have produced at least one good result—namely, it should have secured a notable improvement in the general sanitation of the town. In this respect it must at once be acknowledged that the local authorities have shown commendable zeal in striving to act consistently with this principle. They have attempted to deal with insanitary conditions and have effected many notable improvements. The last of these has been the erection of a crematorium. In this respect Leicester is only following the example, not merely of the metropolis, but of various provincial towns, such as Sheffield, Bradford, Hull, &c. Nevertheless, the Leicester crematorium is a credit to the town. If it is not among the first erected it is certainly among the best, and there are still many important centres where there are no crematoriums at all. In these circumstances my first desire on reaching Leicester was to visit the crematorium, notwithstanding the fact that this is but a matter of detail when compared with such problems as isolation hospitals, domestic and public drainage, the flushing and ventilation of sewers, &c. About one and a half miles beyond the last street or consecutive row of houses to the north-east of Leicester there is a new and as yet almost unoccupied cemetery. It is situated in a beautiful undulating country; fine timber, nursery gardens, luxuriant hedgerows, and a brook afford a pleasant relief to the eye on leaving the busy town. On the highest part of the cemetery there are two chapels connected together by cloisters and outbuildings serving as offices or waiting-rooms. The crematorium is an annexe on the east side of the southern chapel. In the nave of this chapel there are rows of seats on each side and a broad vacant space in the centre where the coffin is placed for ordinary funerals. A beautifully carved oak screen and a sea-green plush curtain conceal the chancel When, however, a cremation is to take place the curtain is drawn aside and reveals a catafalque which stands in the place generally occupied by the altar. The pedestal is likewise ornamented with artistic carving in oak. The bier is just the same height as the catafalque. On it the coffin is brought from the outside, and as there are small rollers both on the bier and the catafalque the coffin silently glides from the one to the other when gently pushed forwards. There is no shock and no jolting of the coffin in an unsteady effort to lift it from one place to the other. At the end there is a folding iron door about two feet square, which is ornamented by a hood likewise of artistically carved wood. The religious service proceeds as the coffin rests on the catafalque. At the moment of committal an attendant touches an electric bell; the iron door is then opened and a handle is turned by a man who is waiting inside the crematorium; this sets a revolving or endless chain in motion which draws the coffin off the catafalque through the little door into an intervening space between the chapel and the crematorium. The little iron door is then closed and nothing more is seen of the coffin. There is no noise, the movements seem to take place automatically, and no human hand touches the coffin after it has been placed on the catafalque, all further movements being done by machinery.

Between the chapel wall and the interior of the crematorium—that is, of the furnace itself—there is no open space where the coffin could be reached or touched by any one. From the chapel where all can see it the coffin must either enter the furnace or be brought back into the chapel. Hence no doubts can be entertained as to the identity of the ashes subsequently withdrawn from the crematorium. But for still further security permission is given for two friends or relations to enter the crematorium building and to witness the entire process. Within this building stands the crematorium, a solid fire-clay brick structure about 10 feet square. The door of admission is of iron lined with fire-clay bricks. The pigeon-hole chamber is about three feet square and from seven to eight feet long; its floor is on the same level as the summit of the catafalque in the chapel beyond. Opposite this admission door there is an inspection door and the coffin lies between these two doors. The flooring, however, is perforated so that some of the ashes fall into a smaller chamber beneath. This furnace was designed by the late Mr. Henry Simon, President of the Manchester Cremation Society, and was erected by Messrs Henry Simon, Limited, of Manchester. There is a third—and this is the lowest—inner chamber which contains a coke fire. The fire has to be lighted some hours before the apparatus is used, and it then receives air through the grate in the usual manner. It is only when the walls and air-passages have been thoroughly heated that the body can be introduced. Then the direct supply of air to the furnace is shut off and air is admitted only in the side passages or hollow portion of the wall. This air is thus heated and it descends from above down into the fire. Thus the incinerating chamber is filled with heated air and a state of incandescence is produced. The degree of heat can be regulated and is generally worked up to 2000° F. In the inspection door there is a circular aperture about four inches in diameter protected by mica. The brilliancy of the light produced by the incandescence is such that there is no difficulty in seeing through the mica all that occurs within the crematorium. There is therefore no danger of opening the crematorium before the operation is completely terminated. Flames are scarcely visible; there is no smoke or noise. The coffin alone might produce a little smoke if not properly made. It should be of dry oak, poplar, or pine boards of not more than three-quarters of an inch thick. Wooden pegs and not nails should be used, nor should there be any paint or varnish. But the coffin may be covered with a thin woollen material and lined with thin zinc.

In front of the crematorium there are two hoppers for feeding the furnace and only coke is used. The only smoke seen is when faggots are being burnt to light the fire. When the hopper is filled with coke a door is closed over it, and then a slide is pulled up by a handle and the coke falls out of the hopper into the furnace. Thus no heat is lost in replenishing the fuel and the air currents are not diverted from their ordinary course. The system is to produce a maximum draught during the preparatory heating of the crematorium, but during the process of cremation the damper in the chimney is half closed and, as already stated, the door of the furnace is completely closed. Only heated air reaches the fire. As yet only one body has been cremated—that of a woman about 50 years of age. There was some delay and the operation commenced some 20 minutes after the appointed time. It lasted one and a half hours but might have been accomplished more promptly had the funeral been more punctual Nevertheless, in spite of this delay it was not necessary to add more fuel or to rake the fire, and this is considered a great advantage, as these operations, it is thought, are likely to hurt the feelings of the mourners; indeed, no fuel was added after 2.50 P.M. The coffin was not placed within the crematorium before 3.30 P.M. and it was all over by 5 P.M. Within 14 minutes of the termination of the operation the ashes can be swept out of the two incineration chambers. This is done with asbestos brushes and the ashes are pushed into a small opening at the extreme end where there is a shaft down which they glide to a hopper that opens under the catafalque in the chapel. Here the friends hold an urn in which they receive the ashes. These consist only of the inorganic residue of the bones and are but silvery grey pumice-like fragments. Nothing can be more pure and more clean than these ashes.

In the crematorium building there is a small pilot furnace which serves to draw off the fumes from the crematorium and where, if necessary, these could be burnt

again by passing through this second fire. In the wall of the crematorium there is a small opening for the insertion of a thermometer, so that the whole operation is thoroughly under control. There is no noise, nothing whatsoever occurs that can in any way harass the feelings of the mourners, and there is a waiting-room where the two witnesses admitted to the crematorium may retire when tired. In regard to the cost, the charge for cremating a body is £2 2*s.* if the deceased was resident in the borough and, if not, it is £5 5*s.* These charges include a plain urn and the keeping of the cremated remains for a year. But these charges may be wholly or partially remitted in cases of extreme poverty, at the discretion of the corporation. If the ashes are removed by friends or buried in the cemetery flower beds no charge is made, but if placed in a niche upon the interior wall of the chapels or cloisters the minimum charge is £3 3*s.* The total cost in fuel and labour, including a preliminary drying of the bricks, which would not be necessary if the crematorium was constantly used, amounted to £1 14*s.* 8*d.* on the one occasion when the Leicester crematorium was used. If the practice of cremation becomes general the cost to the corporation will probably amount to £1 10*s.* for each body.

Altogether, the entire installation has been skilfully contrived and artistically decorated, so that the feelings of the mourners may not be hurt or wounded in any way, and the greatest reverence and decorum are preserved throughout. Scientifically there can be no question as to the sanitary advantage of the process and much has here been done to meet the sentimental objections.

(To be continued.)

Looking Back.

FROM

THE LANCET, *SATURDAY, OCTOBER 2*, 1824.

HYDROPHOBIA.

Whether any specific poison be communicated by the bite of a rabid animal, capable of producing the train of symptoms designated *hydrophobia*, or whether those symptoms are merely the result of a lacerated wound in an irritable constitution, are still questions of dispute with many of the most eminent medical characters. The subject is altogether pregnant with difficulties, and as yet we[1] are not in the possession of a sufficient number of facts to lead us to any definite conclusion. It is well known, that of many persons bitten by the same animal, some will be affected while others will altogether escape. Again it is known that some individuals are entirely insensible to the influence of particular poisons, while others are more easily affected by such agents at one time than at another. The bodies of those persons who have been destroyed have, upon examination, been found to possess some peculiar structure, some deviation from the natural figure, either of the bony envelope of the brain, or some ossific deposits on the spinal marrow, which, acting as mechanical stimuli, rendered the nervous system in the highest degree irritable.

There is evidently a difference between *tetanus* and *hydrophobia*, although we admit that there is some analogy in the two diseases. In *tetanus* the muscles of the larynx, pharynx, and indeed the whole of the muscles concerned in the process of deglutition, are rigidly contracted, and that contraction is perfectly *involuntary*; but this is not the case in hydrophobia, the actions of the muscles, though violent, appear to be in some degree under the influence of the will, and in the case[2] at GUY'S, the man swallowed his saliva very readily, and to which he even called the attention of the spectators.

Hydrophobia, then, may still be considered one of the opprobria of surgery, and which stain on its splendour we hope to see speedily removed by the concurrent influence of talent, and perseverance.

[1] Editorial observations.

[2] Account published in THE LANCET of Sept. 18th, 1824. This was the first case in this country in which M. Magendie's remedy (injection of water into the veins) was applied.

THE BRUSSELS CONGRESS ON VENEREAL DISEASES.

(FROM OUR SPECIAL CORRESPONDENT.)

THE second International Congress for the Prophylaxis of Syphilis and Venereal Diseases was held in Brussels from Sept. 1st to 6th, under the presidency of M. le Jeune, Minister of State. Again a considerable part of the discussion hinged on the question whether the State regulation of prostitution had been productive of satisfactory results, and there was the customary divergence of opinion between the regulationists and the abolitionists. It was early evident that the advocates of "regulation" had considerably modified the views expressed on previous occasions, and the opportunity was taken by the majority of the French representatives to announce that they were not in favour of their system as at present carried out. No practical benefit would result from a *résumé* of the large number of speeches delivered at the meeting, but the general tendency of the opinions expressed may be gathered from the following motions which were put to the vote on the termination of the proceedings.

1. Proposed by Professor LANDOUZY of Paris: That the system of regulation as at present in force had proved to be inefficient and should be abolished, and that it was time to revert to the principle of equal rights and laws for the two sexes.

2. Proposed by M. BÉCO of Brussels: This Congress, having ascertained by the reports submitted to it and by the unanimous voice of those who have taken part in its debates, that the systems for the regulation of prostitution as carried out at present are in many respects defective, especially in that police intervention is prejudicial to the action of the sanitary authorities rather than being of assistance, considers that it is necessary to make a distinction between sanitary measures and police measures and to render them independent of one another in such a way that the prophylaxis of venereal diseases shall be exclusively hygienic and medical in its nature.

3. Proposed by Dr. BALZER: That the second International Congress for the Prophylaxis of Syphilis is of opinion that the Government should restrain the prostitution of girls under 18 years of age by confining them in special places of refuge.

4. Proposed by Professor NEISSER, Professor PETERSEN, Dr. BARTHÉLEMY, Dr. PETRINI, and Dr. DE STURMER: That prostitutes ought to be treated, not as culprits, but as patients subject to a contagious disease.

5. Proposed by Professor DA COSTA, Dr. CHAVES, Dr. SELHORST, Dr. MEES, Dr. VAN DEVENTER, M. MACARÉ, and M. VOORMOLEN: That the Congress is of opinion that the law should confer upon the sanitary authorities, at the request of the surgeon who is treating or who has treated the patient, the power to offer opposition to any marriage where one of the parties concerned is affected by a contagious disease which might be harmful to the other party or to their offspring.

6. Proposed by Professor NEISSER, Professor PETERSEN, Professor DE AMICIS, Professor JADASSOHN, Professor WELANDER, Dr. BLASCHKO, Dr. PONTOPPIDAN, and Dr. BARTHÉLEMY: That all measures to be taken with the object of promoting the prophylaxis of venereal diseases and of preventing the lamentable consequences of prostitution should be regulated by law, which law shall only prescribe the essential measures, the application of which shall be left in the hands of the local authorities.

7. Proposed by Professor NEISSER, Professor DE AMICIS, Professor SANTOLIQUIDO, Professor WELANDER, Dr. BARTHÉLEMY, and Dr. PONTOPPIDAN: That a law should be enforced forbidding any unqualified person from treating cases of venereal disease under a heavy penalty.

8. Proposed by Professor NEISSER, Professor PETERSEN, Professor DE AMICIS, Professor JADASSOHN, Professor WELANDER, Dr. BLASCHKO, Dr. PONTOPPIDAN, and Dr. BARTHÉLEMY: That the law should guarantee to every venereal patient gratuitous treatment at either a hospital or dispensary; that any regulations prejudicial to the treatment of venereal diseases at hospitals should be abolished, that secrecy as to the nature of the disease should be preserved; and that the feelings of the patient should be respected.

From the tone pervading these proposals it is evident that many of those who have hitherto been in favour of the regulation system and have relied upon that for the prophylaxis of venereal disease have come to the conclusion that it has not been productive of any marked diminution in the amount of such disease, and that other steps must be taken with a view of mitigating the evil. Strong views were expressed that the present system of treatment of venereal disease in the out-patient departments of hospitals was utterly inadequate and was to some extent responsible for the prevalence of disease, and that a thorough reorganisation of that system might be productive of satisfactory results.

Professor FOURNIER considered that syphilis was a disease which seldom necessitated treatment in the wards of a hospital but which could be satisfactorily dealt with in out-patient departments. At the present time, however, such treatment was calculated to repel rather than to attract patients, on account of the departments

being insufficient in number and consequently crowded to excess. Instead of being really gratuitous they entailed pecuniary loss for the patient through his having to sacrifice a portion of his day's wages; they were unpleasant, inconvenient, and vexatious, as they involved a public confession of the nature of the disease. The treatment of syphilis should be carried on in special departments attached to the hospitals, and these departments should be numerous and distributed in different parts of the town; they should be open at hours convenient for the patients, probably in the evening; and they should supply medicine gratuitously and should provide each patient with written instructions as to the nature and dangers of the disease both to himself and to others. The patients should be seen singly and not in batches, and the surgeons should be selected for their knowledge of the subject, so that these departments might be of material advantage to the patients and also of great service in the interests of science.

Professor FINGER'S paper coincided with the previous one; insufficient attention was paid to the medical education of those who would later have to undertake the treatment of venereal disease, and the surgeons of many of the large hospitals had no special knowledge of the subject. Special hospitals for these diseases were not advisable because they revealed the nature of the ailment to relatives or acquaintances, but there should be special departments in general hospitals under the charge of surgeons thoroughly conversant with the subject.

Many other questions were discussed, such as contagion through the medium of wet-nurses and midwives, by arm-to-arm vaccination, and in factories and workshops by means of implements of labour, and regulations were proposed with a view of diminishing or abolishing such sources of contagion. The necessity of applying the principles of civil and penal responsibility for the transmission of venereal diseases was under consideration; also the means to be taken to enlighten the young and the general public on the social and individual dangers of venereal diseases, as well as the methods of contagion, direct and indirect; and lastly, suggestions for a uniform basis on which the statistics of venereal diseases in all countries should be formulated.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8510 births and 5002 deaths were registered during the week ending Sept. 27th. The annual rate of mortality in these towns, which had been 15·9, 16·4, and 17·7 per 1000 in the three preceding weeks, declined again last week to 17·5 per 1000. In London the death-rate was 17·0 per 1000, while it averaged 17·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 5·1 in Bournemouth, 6·9 in Hornsey, 8·0 in West Hartlepool, 8·2 in Walthamstow, 8·5 in Handsworth, 10·0 in Blackburn, and 10·3 in King's Norton; the highest rates were 21·6 in Salford, 22·0 in Wigan, 23·1 in Warrington, 23·2 in Stockport, 23·7 in Southampton, 25·9 in Merthyr Tydfil, 26·5 in Liverpool, 26·8 in Middlesbrough, and 27·6 in Preston. The 5002 deaths in these towns last week included 999 which were referred to the principal infectious diseases, against 895, 1064, and 1188 in the three preceding weeks; of these 999 deaths 687 resulted from diarrhœa, 82 from whooping-cough, 65 from measles, 56 from scarlet fever, 56 from "fever" (principally enteric), 49 from diphtheria, and four from small-pox. No death from any of these diseases was registered last week in Bournemouth, Burton-on-Trent or Rochdale, while they caused the lowest death-rates in Ipswich, Handsworth, Kings Norton, Barrow-in-Furness, Halifax, Bradford, York, and Newport (Mon.), and the highest rates in East Ham, Bristol, Liverpool, Bootle, Wigan, Burnley, Preston, and Middlesbrough. The greatest proportional mortality from measles occurred in West Ham, Norwich, Bristol, Hanley, Bootle, and Newcastle-upon-Tyne; from scarlet fever in West Bromwich, Smethwick, Burnley, and Bolton; from whooping-cough in Croydon, Tottenham, Southampton, Wigan, and Preston; from "fever" in Southampton and Smethwick; and from diarrhœa in East Ham, Leicester, Grimsby, Stockport, Liverpool, Wigan, Preston, and Leeds. The mortality from diphtheria showed no marked excess in any of the large towns. The four fatal cases of small-pox registered in these towns last week belonged respectively to Liverpool, Warrington, Sunderland, and Swansea. The Metropolitan Asylums Hospitals contained 42 small-pox patients on Saturday, Sept. 27th, against 95, 71, and 47 on the three preceding Saturdays; four new cases were admitted last week, against 12, 7, and four in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2713, 2669, and 2657 at the end of the three preceding weeks, had risen again to 2703 at the end of last week; 388 new cases were admitted during the week, against 333, 311, and 309 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 123, 134, and 139 in the three preceding weeks, further rose last week to 148, but were 36 below the corrected average number. The causes of 54, or 1·1 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Salford, Bradford, Newcastle-upon-Tyne, and in 49 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Smethwick, Liverpool, Bootle, Warrington, Sheffield, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 14·8 and 14·1 per 1000 in the two preceding weeks, rose again to 15·7 per 1000 during the week ending Sept. 27th, and was 1·0 per 1000 below the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·5 in Aberdeen and 14·0 in Edinburgh to 17·2 in Perth, and 22·7 in Greenock. The 507 deaths in these towns included 27 which resulted from diarrhœa, seven from whooping-cough, six from "fever," five from scarlet fever, two from measles, and one from diphtheria, but not one from small-pox. In all, 48 deaths resulted from these principal infectious diseases last week, against 54, 52, and 46 in the three preceding weeks. These 48 deaths were equal to an annual rate of 1·5 per 1000, which was 2·0 per 1000 below the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 21 in each of the two preceding weeks, increased last week to 27, of which 19 occurred in Glasgow, two in Edinburgh, two in Dundee, and two in Aberdeen. The deaths from whooping-cough, which had been seven and 10 in the two preceding weeks, declined again to seven last week, and included two in Glasgow. The fatal cases of "fever," which had been four in each of the two preceding weeks, rose last week to six, of which three were registered in Glasgow and three in Edinburgh. The deaths from scarlet fever, which had been one, eight, and two in the three preceding weeks, rose again to five last week, and included two in Glasgow. The mortality from both measles and from diphtheria showed a decline from that recorded in the preceding week. The deaths referred to diseases of the respiratory organs in these towns, which had been 82 and 57 in the two preceding weeks, rose again last week to 86, but were 15 below the number in the corresponding period of last year. The causes of 20, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·1 and 22·3 per 1000 in the two preceding weeks, further rose to 28·3 per 1000 during the week ending Sept. 27th. During the 13 weeks of the quarter ending on that date the death-rate averaged 20·7 per 1000, the rates during the same period being 15·3 in London and 15·0 in Edinburgh. The 206 deaths of persons belonging to Dublin registered during the week under notice were 44 in excess of the number in the preceding week, and included 45 which were referred to the principal infectious diseases, against 28, 30, and 41 in the three preceding weeks; of these, 19 resulted from diarrhœa, 10 from measles, eight from "fever," four from diphtheria, three from scarlet fever, and one from whooping-cough. These 45 deaths were equal to an annual rate of 6·2 per 1000, the death-rates last week from the same diseases being 2·9 in London and 1·1 in Edinburgh. The deaths from diarrhœa, which had been 10, 19, and 20 in the three preceding weeks, declined again last week to 19. The fatal

cases of measles, which had been six, and 13, in the two preceding weeks, declined again to 10 last week. The deaths referred to different forms of "fever," which had been three, three, and one in the three preceding weeks, rose again last week to eight. The mortality from diphtheria corresponded with that in the preceding week, while that from scarlet fever showed a slight increase. The 206 deaths in Dublin last week included 59 of children under one year of age and 32 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons exceeded the respective numbers registered in the preceding week. Ten inquest cases and six deaths from violence were registered; and 78, or more than a third, of the deaths occurred in public institutions. The causes of five, or more than 2 per cent., of the deaths registered in Dublin were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified: — Deputy Inspector-General (retired) T. J. Preston to the *President*, additional, for special service at the Public Record Office. Staff Surgeon W. Spry to the *Briton* for the drill season.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel W. L. Lane holds himself in readiness to proceed to Warley and Lieutenant-Colonel A. L. Browne to Taunton for duty. Lieutenant-Colonel W. Dugdale assumes charge of the Station Hospital at Ahmednagar. Major C. S. Sparkes has arrived in the Eastern District for duty. Captain A. F. Tyrrell is appointed for duty in the Home District.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 3rd Durham: Surgeon-Captain J. Drummond to be Surgeon-Major. 5th Lancashire: The undermentioned Surgeon-Captains to be Surgeon-Majors: H. C. Lamport and J. A. Rigby.

Royal Engineers (Volunteers): 1st Durham: Surgeon-Major W. Mearns to be Surgeon-Lieutenant-Colonel.

Rifle: 3rd Volunteer Battalion the Northumberland Fusiliers: Surgeon-Captain W. C. Beatley to be Surgeon-Major. 1st Volunteer Battalion the Durham Light Infantry: Surgeon-Major G. Middlemiss to be Surgeon-Lieutenant-Colonel.

VOLUNTEER INFANTRY BRIGADE BEARER COMPANY.

Sherwood Foresters: Surgeon-Captain R. H. Luce, from the 1st Volunteer Battalion the Derbyshire Regiment, to be Surgeon-Captain and to command under paragraph 55A Volunteer Regulations: Surgeon-Captain H. P. Job, from the 4th Volunteer Battalion the Derbyshire Regiment, to be Surgeon-Captain.

A COMPACT OPERATING CASE FOR MILITARY SERVICE.

Dr. Nicholas Senn of Chicago in a small pamphlet published by the American Medical Association Press briefly discusses the work of the military surgeon in the field and describes what he considers to be the best form of instrument case. Very few instruments, he says, are required to perform any operation provided the selection is made with the requisite care and the surgeon is familiar with their use. The military surgeon should from the very beginning of his professional career endeavour to do his surgical work with as few instruments as possible. An instrument case for field use must contain all the instruments necessary for emergency operations. It must be compact and so arranged that the case and its contents may be sterilised without any difficulty and unnecessary loss of time. From observation and experience Dr. Senn has found that the instruments used in emergency work can be safely carried in roll-up washable canvas rolls in which each article is held securely in place by non-elastic loops. If the name of each instrument is stamped with indelible ink in the place which it should occupy there will be no difficulty experienced in replacing properly and quickly the entire set after use. This plan also makes provision for changing any instrument in the set that may appear desirable and for discarding such as may be regarded as unnecessary, while improved patterns may be substituted as occasion requires. A second and similarly stamped roll properly sterilised should be in readiness in a spare compartment of the outer leather case so that the instrument may be transferred to it after exposure to infection. The outer case should be made of soft flexible material and without sharp corners (Dr. Senn's own case is made of soft leather with rounded ends and corners) and should contain a double compartment, one for the roll of instruments and the other for the empty canvas roll. The canvas cover is eight inches in width and, including the flap, 31 inches in length. The flexible leather cover is nine inches in length, five inches in breadth, and five inches in thickness, and weighs four and a half pounds when filled with the instruments. One of the principal advantages claimed for the instrument-case is that after removing the canvas cover with all its contents, including needles and suturing material, from the leather case, the cover and its contents can be sterilised at a moment's notice by boiling for a few minutes in soda solution. After the operation the instruments should be thoroughly cleaned, dried, and transferred to the second aseptic canvas cover. The instruments include improved forms of bullet probes, bullet forceps, saw for use in minor operations, and rat-toothed tissue forceps with catch slide.

SOUTH AFRICAN WAR MEDAL.

The following instructions have been promulgated in a Special Army Order:—

His Majesty the King has been graciously pleased to approve that a second war medal, bearing his effigy, shall be granted in recognition of the services rendered by the troops in the later phases of the campaign in South Africa, and to reward those soldiers who, by their long service in the field, have brought the war to a successful termination. This medal will be known as the "King's South Africa Medal." Provided the claims are approved by the Commander-in-Chief, the medal, in silver, will be issued to all officers, warrant officers, non-commissioned officers, and men of the British, Indian, and Colonial forces; to civilian medical practitioners and others employed with military hospitals in South Africa; and to all nursing sisters, as defined in Army Order 195 of 1901; provided that (*a*) they were actually serving in South Africa on or after Jan. 1st, 1902, and (*b*) that on that date they had completed 18 months' war service, or subsequently completed such service before June 1st, 1902. In interpreting this rule the actual period of absence from duty, either at home or in South Africa, on account of wounds or sickness directly attributable to service in the field will be allowed to count to make up the period of 18 months. The medal will also be granted to officers, warrant officers, non-commissioned officers, and men who have been invalided by reason of wounds received in action prior to Jan. 1st, 1902, thereby being unable to complete an aggregate service of 18 months in South Africa, provided they returned and served there for any period between Jan. 1st, 1902, and May 31st, 1902, both dates inclusive. Two clasps will also be granted—(*a*) a clasp, "South Africa, 1901," to all who served in South Africa between Jan. 1st, 1901, and Dec. 31st, 1901, both dates inclusive; (*b*) a clasp, "South Africa, 1902," to all who served in South Africa between Jan. 1st, 1902, and May 31st, 1902, both dates inclusive. The above clasps will be worn with the medal granted by Army Order 94 of 1901 by those qualified to receive them, if they are not entitled to receive the medal granted by this Order. If they are entitled to receive the medal granted by this Order the above clasps will be worn with it.

Civilian medical practitioners and others employed with military hospitals in South Africa who are now at home should send their claims to medals through the Director-General, Army Medical Service, War Office, London, S.W., taking care to specify the units with which they served.

THE "SHANGHAI" OPERATION FOR ABSCESSES OF THE LIVER.

Writing in the *Archives de Médecine Navale* for August last Dr. Moulinier of the French naval medical service discusses the operative methods in vogue amongst English surgeons at Shanghai in cases of hepatic abscess. In December, 1880, Ayme introduced into France what came to be called the "Shanghai method" in that country, ascribing its origin to Stromeyer Little. The operation, of which an essential feature was free incision into the substance of the gland, was at once taken up by French surgeons who obtained, and are still obtaining, the most brilliant results; but it was then pointed out by Bertrand and Fontan in their work "Traité de l'Hépatite Suppurée," p. 516, that a similar mode of procedure had been described in THE LANCET of June 29th, 1878, p. 931, by Henderson and MacLeod. It is true, continues Dr. Moulinier, that in both operations the object was to evacuate the pus through incisions made by means of a bistoury, but in one case the freest possible issue was provided for, whereas in the other the incision, which at first had a maximum of two inches in length, has since been gradually reduced until at present it consists of a tear produced by a dilator rather than of a clean opening by a sharp-edged instrument. The latter method is the one now practised at Shanghai, where Dr. Moulinier says the results are scarcely satisfactory. In the General Hospital during 1900 there were 14 cases of hepatic abscess in which the

pus was evacuated by means of dilatation. Five patients recovered, seven died, and two remained under treatment. Incidentally Dr. Moulinier alludes to the evacuation of hepatic abscesses by means of puncture and drainage, and in this connexion cites some well-known names, but he makes no mention of the system for removal by aspiration which was introduced by the late Professor Dieulafoy, presumably because free incision is far preferable to aspiration.

DEATHS IN THE SERVICES.

Brigade-Surgeon Charles Wyat Watling, A.M.S. (retired), on Sept. 26th, at Exmouth. He entered the service in 1859 and retired with the rank of honorary brigade-surgeon in 1885. He served in the Afghan War of 1878–80 and was present in the engagements at Ahmed Kheyl and Urzoo (medal with clasp). In the Nile expedition of 1884–85 he was in charge of the field hospital at Korti and Abu Dom (medal with clasp and Khedive's star).

Colonel Richard Hugh Carew, D.S.O., R.A.M.C. (retired), in his sixth-second year, on Sept. 24th at Srinaghur, Kashmir. In 1865 he entered the Army Medical Service as assistant surgeon and reached the rank of colonel in 1895, retiring in 1901. In the Abyssinian campaign of 1868 he served with the 45th Regiment and was present at the capture of Magdala (medal). As senior medical officer with the Sikhim expedition in 1888 he was mentioned in despatches (D.S.O. and medal with clasp). He also served in the campaign on the North-West Frontier of India under Sir W. Lockhart in 1897–98, with the Tochi field force as principal medical officer, when he was again mentioned in despatches (medal with clasp).

THE ROYAL WARRANT AND THE INDIAN MEDICAL SERVICE.

The *Army and Navy Gazette* of Sept. 27th says:—"Although there has been some delay in giving effect to it, the Government of India adhere strictly to their decision that the Royal Warrant granting certain extra pay and allowance to officers of the Royal Army Medical Corps is to be made applicable to India. What at present is occupying consideration is the detailed scale of pay and allowance which can be held fairly to correspond under Indian conditions with the home scale. A final announcement may be expected shortly."

The Secretary of State for War has approved that candidates for commissions in the Royal Army Medical Corps who are over the regulated limit of age at the date of the competitive examination shall be permitted to deduct from their actual age any period of service in the field after Oct. 1st, 1899, that they would be allowed to reckon towards retired pay and gratuity if such deduction will bring them within the age limit.

Correspondence.

"Audi alteram partem."

THE METRIC SYSTEM IN PHARMACY.

To the Editors of THE LANCET.

SIRS,—In spite of strenuous advocacy, in spite of exclusive employment in science, the metric system seems as far as ever from adoption in practical pharmacy. Yet this department of British mensuration is open to the change as no other is. The alteration is ordained on the other side of the Atlantic. In 1904 the apothecaries' weights and measures will cease to be used throughout the United States. In anticipation of the change they are, indeed, now taught in the schools of medicine and pharmacy as a subject of historical interest only. With us the change has probably been largely prevented by the identity of the contractions of gramme and grain and the fear that the use of "gr." would lead to dangerous mistakes. In America the risk seems to be regarded as negligible. So it probably is, by reason of the facts (1) the difference in the quantity ordered would alone indicate, in most cases, which is intended; (2) the number after the contraction would be in Italic figures in the metric system and not in the Roman figures used at present; (3) the common, perhaps constant, employment of the decimal point; and (4) "gm." would be used as the contraction instead of "gr."

For some time both systems have been in use in the United States and it seems time that those prescribers who desire to use the metric system in this country should be able to do so. I presume that there is no legal hindrance to its adoption. Their ability to use it will really depend on the ability of pharmacists to dispense prescriptions so written. On this question the authorities of the Pharmaceutical Society may be able to give some information.

I desire to point out how easily the transition and the use of both systems might be facilitated. If the grain were increased by about $\frac{1}{32}$nd it would be $\frac{1}{15}$th of a gramme. The present grain is 0·065 of a gramme; the gramme is 15·432 grains. An increase of $\frac{1}{32}$nd would be absolutely unimportant in all dosage. It would be the same in all multiples and in all fractions of a grain. The drachm would be four grammes, the ounce 32 grammes, and either the decimal or duodecimal system could be used with precision. It would, indeed, destroy the identity of the grain with that of the troy and avoirdupois weights, but I can discern no practical service that the identity renders.

In the United States the cubic centimetre is to be not only the unit, but the chief element of liquid measure, although no doubt the litre (1000 cubic centimetres) and its larger fractions will be used also. The difference between our present measures and the metric measures is greater, relatively, than in the case of weights. The cubic centimetre is nearly 17 minims (16·96). To make the minim bear the same proportion to the cubic centimetre as the grain does to a gramme it would have to be increased by about a fifteenth (to 1·06). It would entail a corresponding increase in the fluid drachm and fluid ounce to bring about a corresponding parallelism between the weights and measures. I do not think that the increase would be of practical importance in dosage and the minim is a measure which has only the useless reason for its existence that it is the weight in water of the same fraction of an ounce avoirdupois as is a grain. But the ounce avoirdupois is as useless to prescribers as is the minim to wholesale druggists.

Has not the time come when the use of the metric system in pharmacy should be rendered practicable by such a change as is here suggested? The alteration in the grain and minim would only permit and not compel. The old method could still be employed with the altered units. If asked for by adequate representatives of those whom it alone concerns it could scarcely be refused by the Board of Trade. The use of the decimal system would, indeed, be possible without the authorised alteration in the units. The metric system could be employed in the weights without risk of inconvenience, the gramme being treated as consisting of 15 grains. The cubic centimetre can be used for liquids on the common, somewhat loose, but convenient method (advocated by Martindale) of regarding 30 cubic centimetres as equal to a fluid ounce and the cubic centimetre as corresponding to 16 minims. The use of the cubic centimetre with the fluid ounce would save dispensers the serious inconvenience occasioned by the new sizes of metric medicine bottles, since the doses might still be in ounces and half ounces (30 and 15 cubic centimetres), and any variation would be only in the quantity of water conveying the active agents.

There is nothing new in these suggestions, but I think the time is meet for the reconsideration of the subject. The practical recognition of the two systems, and the use of one or the other, would enable judgment to be matured by experience. Only thus is a true estimate possible, for the unfamiliar ever seems inferior.

I am, Sirs, yours faithfully,

London, Sept. 27th, 1902. WILLIAM R. GOWERS.

MUCIN AND MALIGNANCY: FACTS AND THEORIES.

To the Editors of THE LANCET.

SIRS,—I have perused with much attention and interest the communication by Mr. W. Stuart-Low published in THE LANCET of Sept. 20th, p. 807, and I must confess a sense of extreme disappointment after such perusal. I was hopeful—almost expectant—that some great good might arise to suffering humanity from such an attractive alliterative title. I discovered, however, after carefully dissecting the argument contained therein, that it was nought but a delicate tissue of physiological and pathological facts held together by an assumptive mucin of theory. The author begins his

dissertation with a digest of physiological facts which bears a strange family likeness to that given in Halliburton's book. Then he proceeds to inform his *confrères* that "the essential lesion of carcinoma is the penetration of cells into the surrounding tissues"—which is not, I think, a *quæstio vexata* to the profession. He then favours us with a *résumé* of the usual sites of malignant growths and caps the first portion of his discourse with an extraordinary and suggestive table of 15 cases of malignant disease. Proceeding, he dilates upon the advantages of sanitation as a buffer-state between us and disease, favours us with a short lecture upon the comparative anatomy of the naso-pharynx in the domestic animals—among which, by the way, malignant disease is extremely rare—and all this is neatly framed in this same theory of mucin. This theory may be briefly stated thus: "Where mucin or mucus is morbidly diminished in quantity in the human economy there the risk of the development of malignant growth is increased."

Of all the arguments set forth since the time of Euclid I venture to assert that those here advanced in support of this mucin theory are the feeblest. The whole argument turns upon the statement made in regard to mucin that "its peculiar chemical composition and behaviour (!) lend support to the belief that it has some further function." The generally accepted opinion is that mucus acts as a lubricant, and hence as a protective, and there is absolutely no evidence adduced by Mr. Stuart-Low in his paper to show that it has to subserve any more serious function or purpose. There are to be observed throughout the paper many instances of disregard of syntactical rules that tend to obscure the Q. E. D of his argument, and a triteness is often present which appears to need purgation. Let us take a few excerpts at random and endeavour to ascertain, if possible, their exact significance in so far as the theory is concerned—e.g.: "The essential lesion of carcinoma is the penetration of cells into the surrounding tissues, but whether this new departure on the part of the cells is a result of a cellular change or of some alteration in the intracellular resisting substance is not yet clear," and, I venture to say, never will be so far as the intercellular "resisting" substance is concerned. Again, e.g., "physiologists mostly agree that mucin is not broken up in the digestive process, but that it passes by the bowel unchanged. The very large amount secreted, however, and the comparatively small amount excreted would indicate that much is destroyed or absorbed in the small intestine and the great additional supply in the large bowel supports this supposition." Now, does it not occur to the author that the "large additional" supply of mucus in the large bowel is nature's response to a call for more lubricant?—the contents are more solid and therefore require more mucus to favour their expulsion. Indeed, the whole argument in this excerpt is very obscure. Again, e.g., "Cancer is most seldom met with ..... in the small intestines and in the lungs," and the author attributes this to the abundant supply of mucus to those structures, despite the fact that the contents of the one are semi-fluid and the air supplied to the latter is filtered and warmed. Again, e.g., "It is pathologically proverbial that malignant disease attacks and spreads in the mamma"; then it is pointed out most emphatically that there is no mucus in this gland—not a particle, but only the fat of the milk to act as a lubricant, &c. Does it not occur to the author that carcinoma may develop in a virgin breast, that the breast is much exposed to injury and to pressure from the wearing of stays, that it may become congested and may be painful and tender at each menstrual epoch, and that in parous women its structure may become damaged by over-distension during lactation? And are not these sufficient reasons for its being a common site for carcinoma without accusing it of a deed of omission in not secreting "mucus" to safeguard it against malignancy? Is Mr. Stuart-Low or nature here at fault?

Now let us criticise this "Table of 15 Cases of Malignant Disease." At the first glance they appear to have been a bad lot. It begins with a "backer of horses" and ends with a "dustman." They were all great eaters of salt, most of them were enormous smokers (except the ladies), most had had syphilis (one case being set down as "doubtful" but was exposed to infection in his younger days), and *all* of them suffered from hypomyxia—scantiness of mucus-supply. Now, I ask, is it possible for an educated medical man to regard such a table with any degree of equanimity? Does it not occur to his mind that it exhibits a most extraordinary concatenation of unusual habits and morbid affections for so brief a list. Every one had suffered from hypomyxia, one for a period of 30 years. I'faith—this is assertion, truly; but where is proof of such a statement? and why common salt is so prominently set forward in the category and not irritating condiments, such as pepper and mustard in excess, is somewhat obscure. I quite agree that a man who eats an excessive quantity of salt, who contracts syphilis, who smokes a pound of tobacco per week, and who follows a dusty and unhealthy occupation, without any question of the imbibition of alcohol to excess, about which evidently no question was asked, is a person fully qualified for malignant disease. And by comparison with such qualifications I should regard a diminished secretion of mucus in the nasal passages, &c., as quite a trivial concern. It is quite obvious that much time and thought have been bestowed upon the preparation of this paper by its author, but I am convinced that, abandoning synthetical methods, if he will devote such time and energy to analytical research, some good might arise therefrom, instead of wasting them in pursuing the phantasmagoria of theoretical science.

I am, Sirs, yours faithfully,

London, S.E., Sept. 20th, 1902. W. LANSDALE, M.D. Durh.

THE DANGERS OF COMMON COLDS.

To the Editors of THE LANCET.

SIRS,—I am exceedingly pleased that your correspondent, Dr. O. Clayton Jones, has reopened this subject by his pertinent letter in THE LANCET of Sept. 6th, p. 708. From the standpoint of the bacteriologist the subject is highly interesting, and from the medical man's point of view most important. Many of the symptoms of common colds, and especially the initial ones, such as rhinorrhœa, lacrymation, sneezing, and chills, can be, and are, produced by numerous local irritants. The insufflation of certain powders, the breathing-in of air differing appreciably in temperature or humidity will occasion them; this may explain the popular belief in the occurrence of colds during the prevalence of east winds and also the sneezing and coryza so frequent in some persons when retiring to rest. Sudden immersion in cold or salt water, as occurs in bathing, will in some persons produce the same symptoms. Idiosyncrasy is a powerful factor in these cases, as is observed in the numerous martyrs to that distressful neurosis, "hay fever." I am acquainted with a gentleman who has a violent attack of sneezing, lacrymation, and subsequent prostration immediately upon awakening in the morning, which he and I attribute to the irritation of the sun's rays, as he says it is always worse on a sunny morning. I am convinced that what is termed a "thorough chill" or "wet feet" may produce a similar sequence of symptoms. But these "pseudo colds," if I may use the term, are quite distinct from the infective cold which attacks several members of a family and the course of which I have described in some of my previous letters. The distinguishing points of the true cold are, roughly, the higher temperature, the longer duration of the illness, its contagious nature, its tendency to spread along the mucous membranes, its implication of the adjacent lymphatics, and lastly, that the cause is not evident. This last point is the most important, and is the one which both the public and ourselves appear not to realise, and around which, it seems to me, the whole of the discussion which you have been good enough to allow in your columns centres. We accept the statement that common colds are the result of some external chill, variation in temperature, inadvisable change of clothing, *et omne genus*, without due consideration, just as we allow ourselves to accept the *ipsi dixit* of the lay public upon other kindred subjects. The same etiological factors are usually credited with being the cause of pneumonia, puerperal fever, kidney disease, &c., and the medical man frequently acquiesces in these supposed causes. We must remember that the lay public interpret the initial rigor as the primary cause of numerous illnesses, whereas we know them to indicate, the invasion of the system by some toxæmia—bacillogenic, coccogenic, or otherwise. Is it possible to believe that these views, even though widely and generally accepted, are the correct ones upon the origin and cause of the thousand-and-one ailments, from toothache to pneumonia, with which they are credited? To my mind, if they are factors, most probably they are remote ones, and as knowledge increases will be deemed relatively insignificant and inadequate.

So far as I know the micro-organisms of acute febrile catarrh have been carefully studied by few. Dr. Edmund Cautley, at the suggestion of the late Dr. (afterwards Sir Richard) Thorne, has made a special study of this subject. A full account is given in the twenty-fourth annual report of the Local Government Board, year 1894-95, p. 455 *et seq.* He claims that he has isolated and describes a microbe in seven out of the eight cases of acute cold which he examined. To this microbe he has given the name "bacillus coryzæ segmentosus," and he believes it to be the cause of the ordinary household infectious cold. He says that "it closely resembles the influenza bacillus in many of its characteristics," and that "its duration of life is very short, rarely more than three days, whether grown upon agar agar or in broth." Dr. C. Riviere, assistant physician to the East London Children's Hospital, Shadwell, kindly examined culturally two swabs I sent him from typical cases of nasal catarrh, but was unable to isolate the specific bacillus; he thinks that his inability to do so is due to the difficulties of their transport. He is at present investigating the bacteriological aspect of this question.

In the *Medical Chronicle* for June for this year Mr. J. G. McNaughton excerpts from the *Revue de Médecine*, vol. xxii., p. 508, from an article by Carrière, who there describes seven cases of primary sore-throat due to the micrococcus tetragenus. Carrière's description of the symptoms closely resembles the sore-throat so frequently associated, in my experience, with the influenza type of common cold. It would appear that there may be some connexion between these two affections. Carrière says, "This coccus is found frequently in the normal nasal mucus, in the tonsils, and the pharynx," and suggests that it requires some other influence or condition to render it pathogenic.

The clinical side of this question can be studied by each medical practitioner, as, unfortunately, cases are only too frequent in his own household. Experience leads us to believe that infection can be spread by sneezing and by pocket-handkerchiefs which have been used. Amongst children and not over-particularly cleanly persons where spoons, cups, sweets, various articles of foods, and fingers are promiscuously applied, the methods of spreading infection appear to be innumerable. We cannot too strongly impress the dangers of spreading infectious colds; to the robust they are most inconvenient and disagreeable, and to the subjects of chronic bronchitis, consumption, and other respiratory troubles their consequences may be most serious. To the latter I always say, Avoid as much as you can chills, night air, damp clothes, hot rooms, &c., but above all beware of intimate contact with persons suffering from the early stages of acute common cold. I have frequently prohibited relatives, and even professional nurses, affected with colds from attending upon their friends, or patients. These precautions are often difficult to carry out, but there is a growing impression among the profession of their necessity, and I know of many prominent members of it who fully realise the need of them, and enforce them in practice. If a professional nurse suffers from a cold and is attending upon a susceptible patient the following questions immediately arise: At what stage, and for how long is she infective? How does she convey the infection? Can she adopt precautions to render herself less liable to convey infection? All these are points of the highest interest and importance and they demand a definite expression of opinion from the profession.

I am, Sirs, yours faithfully,

Wigan, Sept. 30th, 1902. R. PROSSER WHITE.

THE USE OF SUBCUTANEOUS INJECTIONS OF NORMAL HORSE SERUM IN CASES OF EXTREME EXHAUSTION OR INABILITY TO ASSIMILATE FOOD.

To the Editors of THE LANCET.

SIRS,—It is interesting to follow for a moment the various stages of developments in feeding which have come about in the last 10 or 12 years in cases where the patients are precluded from taking food by the mouth or are unable to assimilate it when taken. The numbers of cases which fall into one or other category are legion, varying from stenosis of the œsophagus to the marasmus induced in children by artificial feeding. The first attempt to relieve the stomach of work it objected to do or was incapable of doing was by the administration of food per rectum and this method proves every day of incalculable value in cases where we wish to give the stomach a complete rest, as after hæmatemesis, or a more prolonged one in getting an old chronic ulcer of the stomach to heal. In infants, again, who are suffering from incessant vomiting and rejection of all food, no matter how unirritating it may be, of what service it proves in providing the child with nutriment until such time as the digestive arrangements return to their duty.

The next attempt at feeding came in the form of subcutaneous injections of normal salt solution, and though used rather more as a temporary stimulant yet may fairly claim to act as a food, or at any rate to supply the equally needed fluid plus the cardiac stimulants in the added salts. Of late we have seen similar use of subcutaneous injections of sugar, which is again a forward step, though the sugar may have to undergo a great number of changes before becoming of any use to the system. Now the latest idea is the use of normal horse serum—a highly albuminous substance which is rapidly absorbed from the place of injection and which being obtained sterilised, as antitoxin serum is, is devoid of all risk of irritation.

I have only had one case, in which I was debarred from seeing for myself the results of its use. The case was as follows. A patient of mine whose confinement I was unable to attend found the child steadily going down hill owing to diarrhœa brought on by artificial feeding, until the child, about the sixteenth day, in spite of oxygen given day and night, had become so enfeebled as no longer to be able to swallow and death in a few hours was regarded as almost certain. At this stage, hearing how desperate the condition was, I made the suggestion to the medical attendant of the use of serum. The credit (if any) of such idea is not mine but belongs to Dr. G. F. Blacker of University College Hospital who had used it in an adult case with success. After much delay, owing to the difficulty of obtaining the serum at night, we obtained it and 10 cubic centimetres were injected the following day. (It will be noted that the child *had* lived through the night and the medical attendant thought it seemed a little better at 10 A.M. than the night before, but at 1 P.M. he decided to inject.) Whether as a result of the injections or not the child has recovered perfectly, though emaciated to the last degree and so feeble that it was absolutely unable to give vent to a cry. As this is the first case to be recorded I trust medical men will hasten to avail themselves of a method which has most far-reaching powers for good in it and is available in many cases, and that they too will let us hear the results.

I am, Sirs, yours faithfully,

RAINSFORD F. GILL, M.D. Lond.

King Henry's-road, N.W., Sept. 27th, 1902.

THE ROYAL ORTHOPÆDIC HOSPITAL.

To the Editors of THE LANCET.

SIRS,—As considerable misapprehension appears to exist in some quarters regarding the scheme for rebuilding this hospital upon a new site, and as the matter has lately been much discussed in the medical press, we feel that in the interest of all concerned in the welfare of the charity, some official statement should be made in order that the main points which have influenced the authorities may be fully understood. Critics of the policy adopted by the hospital authorities contend (1) that there is no pressing need to rebuild; (2) that when we rebuild we should do so on the present freehold site which is too valuable an asset to be parted with at the price agreed upon; and (3) that the proposed sale and rebuilding elsewhere will not benefit the hospital financially.

With regard to (1) the position of the authorities is as follows. The present buildings were never intended for a hospital and are therefore most inconvenient. Amongst many other wants there is no proper accommodation for the staff; there are no ward bathrooms and no proper antiseptic operating theatre with the various appliances and conveniences required in modern hospitals. These and other matters have provoked the criticism of experts, including the council and visitors of the King Edward's Hospital Fund. In fact, affairs were so bad that in 1899 nearly £2000 had to be spent in improving the sanitary arrangements and providing a new drainage system. This outlay was absolutely necessary at the time unless the hospital had closed its doors,

but no amount of expenditure could make he buildings fit for the purposes of the charity.

Much time and careful consideration have been given to the point (2). The question of rebuilding was first considered in 1897 when the committee, not wishing to rebuild elsewhere unless compelled to by want of space, had sketch plans prepared to see what accommodation could be provided upon the existing site, and it was found that it was impossible to erect a hospital of even the present number of beds (50) with all the modern requirements and in accordance with the highest standard of surgical science on our site of less than 7000 super feet, with frontages of 37 feet only and an open space in the centre which could not be built over. In 1898 the Prince of Wales's (now King Edward's) Hospital Fund did not make, as had been expected, an award to the institution, and it was subsequently ascertained that the council did not approve of the character of the buildings in which the work of the charity is conducted, and that in their opinion the hospital should be rebuilt without delay. In 1900 the visitors of the Fund made an inspection of the premises and as a result of their report an award was made to be devoted towards rebuilding on a new site, the grant being conditional upon this being done and steps taken without delay. At the end of last year the committee opened negotiations with a probable purchaser of the site, who has now offered to take it on a lease for 99 years, at £1400 per annum, with the option to purchase within three years at £40,000, and favourable conditions for allowing time to acquire a new site, rebuild, &c., before relinquishing the present premises. This offer the trustees, the committee, and expert authorities consider favourable, and the Charity Commissioners, after an exhaustive inquiry and a report by their own valuer, have given it their approval. The committee have secured the offer of a most suitable corner site from the Duke of Bedford, situate at the junction of Coram-street and Herbrand-street, near Russell square, the chief frontage being in the thoroughfare which has a south aspect. The site, which is considerably larger and better shaped for building purposes than the existing one, has been offered on a 99 years' lease at a ground rent of £500 per annum and in the opinion of the authorities and their professional advisers a good modern hospital can be erected in accordance with the requirements of present-day sanitary and surgical science.

Dealing with point (3) one newspaper has criticised the action of the authorities on the lines that the sale and changes of site will not result in any considerable financial advantage. We are fully alive to this. It should be clearly understood that the change is being made solely with the view of securing greater efficiency and more comfort for the inmates. The public is much more likely to support an institution which is efficient and up-to-date than one which is far from being so and is therefore constantly open to severe criticism.

In conclusion, we wish to say that we simply put this forward as a presentment of our case in consequence of the one-sided statements which have been appearing and which might prejudice the hospital in the minds of those who have no knowledge of our reason for action. We have no intention of entering on any controversy and are content with the knowledge that our policy has the full approval of the Charity Commissioners and an overwhelming number of the governors of the hospital who have expressed their entire approval of the scheme on three separate occasions.

We are, Sirs, yours obediently,

DENBIGH, President.
RICHARD B. MARTIN, Treasurer.
H. H. MARKS, Chairman of Committee.
ERNEST FLOWER, Honorary Secretary.

Sept. 30th, 1902.

*** We are glad to publish this letter, for our point has always been that the policy of the authorities requires explanation. A board desiring to sell the site of the hospital is turned out by a new board which opposes this intention. The second board now takes steps to sell the site and appears willing to accept a sum that many people think inadequate. We have no desire to draw Lord Denbigh and his co-signatories into any controversy, and we are relieved to find from the closing sentence of their letter that they are indifferent to any remarks we may make because of certain expression of approval that they have received. We feel, therefore, free to state that we consider that their reasoning is unsound. Having a strong financial position within their grasp, if they care to exercise patience, they are risking its sacrifice in the hope that the public will make up any loss. The financial position of most of the really important medical charities of the metropolis should warn them to take every care before entering upon a course which they admit "will not result in any considerable financial advantage" to the institution in their charge. When they have sold their site and built their new and expensive institution what must happen if the public does not come to the rescue? One more bankrupt charity will weary the beneficent by pleading for aid.—ED. L.

MEDICAL NOMENCLATURE.

To the Editors of THE LANCET.

SIRS,—I should like to call attention to the following extract which forms the conclusion of a leading article in the *Times* of Sept. 11th, an article referring to the meeting of the British Association:—

> We have often thought, moreover, that a certain proportion of popular indifference to science may be traced to the repulsive character of its nomenclature. Men of science are not necessarily *literati*, and in some mysterious way they have addicted themselves to the employment of a horrible jargon, believed to be a patchwork made up of a curious assortment of ill-understood words taken from Greek and Latin dictionaries, usually with but slender reference to their real signification. The result is a vocabulary which is ludicrous to scholars and unintelligible to those who have no scholarship. *It can hardly be disputed that the use of this sort of language has definitely lowered the status of the medical profession among gentlemen of liberal education;* and it need occasion no surprise if it has had its share in diverting from the temple of science many of those who, in other circumstances, might have endeavoured to make good their entrance.

If the reflection herein contained on the language of our medical literature and its effect on the status of the medical profession is just it is surely a subject which may well engage our serious attention, especially at the beginning of another educational year. If a knowledge, however elementary, of the learned languages is to be no longer required of medical students it is certain that much of our medical nomenclature will become an "assortment of ill-understood words" to the majority of the medical profession.

I am, Sirs, yours faithfully,

Oct. 1st, 1902. I. BURNEY YEO, M.D. Lond.

"THE IMPUDENCE OF CERTAIN ADVERTISING DRUGGISTS."

To the Editors of THE LANCET.

SIRS,—Our attention has been called to a letter from Sir William Broadbent which appeared in your issue of 20th ult. With reference to the appearance of Sir William Broadbent's name in the American journal mentioned, we at once cabled to our New York manager for an explanation and have received the following cablegram in reply:—

"22th September, 1902.

"Discovered mistake inserting Sir William Broadbent's name June 15th. Ordered immediate withdrawal, which was done. Since then omitted everywhere."

The error, which we regret, in the appearance of Sir William Broadbent's name was discovered as far back as June 15th last and rectified on that date, which fact alone is sufficient proof of our good faith. We may add that on this side of the Atlantic no reference whatever to Sir William Broadbent in any advertisement, journal, or otherwise has been made in connexion with Kutnow's powder.

While apologising for this error we wish to protest strongly against the wrongful insinuation that we make it a common practice to use the names of deceased members of the medical profession so that their memory can be desecrated with impunity. As a matter of fact, we have in our possession and open to inspection the written testimonials of eminent English and foreign physicians, and surgeons, both living and dead, including one by the late Mr. Lawson Tait, whose name has been mentioned, testifying to the efficacy and merits of Kutnow's powder. As an unwarranted charge has been made publicly against us we trust in fairness to ourselves you will allow us as publicly to refute it. Further, it would have been more courteous if Sir William Broadbent

before addressing his communication to your columns on the 16th ult. had awaited our explanation in answer to the letter which he wrote to us on the same day.

We are, Sirs, your obedient servants,
KUTNOW BROTHERS, Limited.
(FRANK W JOWETT, Secretary.)

Farringdon-road, London, E.C., Oct. 1st, 1902.

THE MANCHESTER MEETING OF THE BRITISH MEDICAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I have only just noticed the report of the Ethical Section of the British Medical Association at the annual meeting in THE LANCET for August 9th, p. 391, in which I am reported to have characterised "club practice as immoral, because it led to the neglect of surgical and important cases which the club medical officer passed on to the hospital." What I said was that club practice to any large extent led to a moral and mental degeneration of the doctor and an absolute loss of dignity. I defy any man with a large club practice to maintain the moral standard and standard of efficiency in his work with which he started his career. Everything that can be shunted on to the hospitals is got rid of at the earliest opportunity to save trouble. Methodical habits go to the wall and the man becomes a mere prescribing chemist whose object is to do as little work as he can without offending the members of the lodge or slate club, in order to earn this settled quarterly payment." How delightfully dignified is the position, after having had some petty quarrel with a club member, of being summoned before the lodge meeting to answer for your conduct and to be haled (unless you want to lose the post) into the smoke reeking bar-parlour of a fourth-rate pothouse and there to be heckled by the half-drunken denizens of the Pig and Whistle. Your reporting of the Ethical Section left much to be desired and I must protest against the utter balderdash with which you have labeled me.

I am, Sirs, yours faithfully,
Accrington. ELWIN H. T. NASH.

*** We print the above letter because it confirms what our Special Commissioner has so often stated in regard to the degrading effects of club practice and the tendency to send to the hospital cases that could be treated by private practitioners which results therefrom. In regard to our report of his speech at the meeting of the Ethical Section, which Mr. Nash politely qualifies as balderdash, his version shows that the summary given of his remarks was much the same as his own. We said that he "qualified club practice as immoral, because it led to the neglect of surgical and important cases which the club medical officer passed on to the hospital," and we still claim that this is as complete a summary of his speech and of the above letter as can well be given in a single sentence. Perhaps Mr. Nash thinks we ought to have given a longer account of his speech, but space is limited, and yet the amount we devoted to the meetings of the Ethical Section was greater than that given in other journals.—ED. L.

THE CERTIFYING OF LUNATICS.

To the Editors of THE LANCET.

SIRS,—We should be glad if you could inform us whether it is the usual practice for the Poor-law district medical officer to certify all pauper lunatics in his district irrespective of the fact that they are being professionally attended by their own private practitioner. In this district when we have a case to be certified we inform the relieving officer of the fact and the matter then passes out of our hands. The Poor-law medical officer is called in and he signs the necessary papers and pockets the fee. We believe that in many districts the relieving officer requests the attending practitioner to sign the certificate and arranges the interview with the magistrate, &c. The point we wish to get at is whether it is probable that the guardians instruct their relieving officer to call in their own medical officer in every case, or whether it is likely to be a private arrangement between the relieving officer and the medical officer. If the latter be the case it is obviously unfair to the other men and the matter should be rectified without delay.

We are, Sirs, yours faithfully,
Sept. 20th, 1902. FAIRPLAY & CO.

*** The Poor-law district medical officer is often, on appointment by the guardians, told that it is one of his regular duties to certify pauper lunatics, although in some districts the relieving officer requests the attending practitioner to sign the certificate. The relieving officer usually follows some general instruction from the guardians as to the medical officer who should be asked to sign the certificates. Anything like a private arrangement between the relieving officer and the particular medical officer is wrong and might easily make both parties liable to prosecution. The recent scandals connected with certain Poor-law unions in which the relieving officers had received payments from proprietors of private asylums in connexion with the certifying of lunatics will be fresh in the memory of our readers.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—Scientific Research in India: a New Board of Advice.

A FURTHER increase is reported this week in the mortality from plague throughout India. The deaths were 4862 as compared with 4371 for the previous seven days. In Bombay city 44 deaths were recorded, in Bombay Presidency 3626, in Karachi 3, in Madras Presidency 173, in Calcutta 24, in United Provinces 193, in Punjab 56, in Mysore 63, in Hyderabad 72, and in Berar 33. The cities of Bombay and Calcutta both show an increase. The disease is active in the Mofussil districts of Bombay but it is slumbering elsewhere. At Kasauli and in the neighbourhood of Simla it shows signs of spreading. The following medical officers who are to be employed in the inoculation campaign of the Punjab Government have arrived from England: Dr. J. Elkington, Dr. G. Bond, Mr. J. Gardiner, Dr. G. C. P. Forsyth, Dr. G. Rouseman, Dr. R. Mitchell, Dr. J. Miller, and Dr. J. H. Rankin.

Scientific research in India is being developed and fostered by the Government of India. Two mining experts have been added to the geological department, a cryptogamic botanist has been appointed whose special duty it is to study the fungoid diseases of agricultural products, a botanist for Madras whose attention will be mainly devoted to economic inquiry has been permanently retained, an agricultural chemist is at work, a curator of economic products with special qualifications as an economic chemist has been recently secured, a skilled entomologist is about to be obtained, and an inspector-general of agriculture has been appointed. There is to be a central advisory board to insure that the work of scientific research is distributed to the best advantage. It will comprise the heads of the meteorological, botanical, forests, survey, agricultural, and veterinary departments, and it will act as an intermediary between the Government and its scientific officers. To complete this very admirable scheme is required a similarly constituted board with a full staff for the original investigation of human diseases. There are many complaints calling for further research—for example, the dubious remittent fever, epidemic dropsy, of which small outbreaks have occurred both in Calcutta and Bombay, the so-called acute hepatitis of infants, a disease of puerperal women shown by continued diarrhœa with fever, the frequency of tetanus amongst the newly born, and the "pot-bellies" of nearly all native children. Clinical observation has done little, and more scientific research with regard to these conditions is wanted.

Sept. 5th.

OFFENSIVE TRADES.—At the Bath Police-court on Sept. 24th the Bath urban sanitary authority summoned a tradesman for recently establishing in the city the offensive trade of a fellmonger or dealer in hides and skins without the consent of the sanitary authority. The magistrates imposed a fine of five guineas with five guineas costs.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Poor-law Expenditure

THE Birmingham board of guardians has just issued its financial statement for the year ending Lady Day, 1902. The return affords some interesting and instructive details which explain how such large sums of money are spent in the maintenance of the poor in a large city. The account shows that the net receipts during the year were £363,607 7*s.* 6*d.* and that the expenditure amounted to £335,368 (including £226,356 paid to the city council), thus leaving a balance in favour of the parish of £28,239 7*s.* 6*d.* Particulars of the expenditure of the various departments are given. For the infirmary it was £33,112, being a reduction for the year of £3420. The return also states that the vaccination fees paid to medical men amounted to £1154, of which £1110 have been paid to the public vaccinators. This evidently is proof of the activity displayed and useful work done in warding-off the approach of a small-pox epidemic. The perusal of the report should afford satisfaction to the ratepayers who are desirous of knowing what is done with the large amount of money levied for the purposes of Poor-law administration.

Black Country Sports.

In times gone by the area known as "the Black Country," a large mining district between Birmingham and Wolverhampton, had an unenviable notoriety for the low type of civilisation which prevailed in its midst. Some of the older inhabitants still recollect the time when cock-fighting, dog-fighting, and bull-baiting were frequent. Nor do they forget the displays of prowess in human combats by which the victor became renowned in the district. The fame of the "Tipton Slasher" as a champion in the so-called "noble art of self-defence" spread far beyond the locality and great was the admiration excited by his appearance in "the ring." Gradually these degrading and brutal exhibitions have diminished and decayed under the refining and elevating influences of education and public opinion. Recrudescences, however, occasionally appear. At Bilston on Sept. 20th an instance occurred of this retroversion to the lower level. A fight was arranged to take place in the presence of a number of spectators between two dogs and after a sanguinary struggle both dogs were killed. The police fortunately took cognizance of it and the principal offender was charged at the police-court with permitting such a revolting combat. An ingenious defence was set up that a conviction could not be procured unless it was proved that the place had been regularly kept for the purpose of dog-fighting. Very rightly the stipendiary magistrate overruled the contention, and while regretting that he had not power to send the defendant to prison, a sentiment largely endorsed, he inflicted a fine of £3 and £3 costs. Cruelty of this detestable nature cannot be too strongly reprobated.

Swimming.

That swimming is a remarkably healthy and useful exercise is a fact not sufficiently understood. Some efforts have been made in this city to make its benefits more generally known and to encourage the practice. The Birmingham Athletic Institute Elementary Schools Committee has done much to foster and to encourage the habitual practice of swimming. The privilege of bathing has been extended to all the elementary schools with the result that last year 62,000 children availed themselves of the halfpenny admission fee to enjoy themselves in the various baths. This year the number has been somewhat less, no doubt owing to the bad weather which has prevailed. One of the conditions established for promoting success is that if a child can swim one length of a certain bath this feat shall entitle him to a free pass for the season, and as a further result may entitle the child to have free access for several years provided that the test is kept up. Cleanliness and exercise, health and amusement are thus promoted and an immense gain is derived from the pastime. The benefit imparted to the poorer and less favoured classes well repays the care and attention bestowed on the scheme by the promoters of it.

Scarlet Fever.

The epidemic of scarlet fever in our midst at the present time shows no signs of diminution but rather is on the increase. For the week ending Sept. 20th there were 89 fresh cases notified, with four deaths, while in the succeeding week the fresh cases numbered 108. An opportunity might be given to Dr. Moser of Vienna to exercise his art in the use of the serum as a remedy against this dread disease among children. Its application would be watched with interest.

Sept. 30th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Royal Institute of Public Health.

THE Lord Mayor of Liverpool, acting upon the request of the health committee of the city council supplemented by similar requests from other committees of the corporation, has invited the Royal Institute of Public Health to hold its next congress in Liverpool. This invitation was accepted by the President on behalf of the council of the institute, and the formal invitation was made by Dr. Thomas Clarke, the chairman of the hospitals committee, on behalf of the Lord Mayor, at the annual congress recently held at Exeter. In all probability the meeting in Liverpool will take place about the third week in July, 1903. The Earl of Derby has been invited by the Lord Mayor to accept the position of president at the forthcoming conference. A preliminary meeting has been held in Liverpool, called by the Lord Mayor, at which representatives of corporate committees, University College, and others, were present. Steps were taken for the formation of a general committee (with power to add to its number) which is to consist of representative citizens interested in public health, including members of the various sections of commerce, ministers of religion, and members of the medical profession. It is hoped that St. George's Hall may be available for the meeting.

Health of Liverpool.

Small-pox has not yet been stamped out in Liverpool, two cases having been reported during the past week. There are now 27 cases in hospital. Letters have lately appeared in the local press referring to the insanitary condition of St. Michael's Hamlet, a district bordering on the fashionable neighbourhood of Sefton Park. The subject was alluded to at the meeting of the health committee by Alderman Roberts who refuted the allegations made in the press that scarlet fever and diphtheria were prevalent in that district. He pointed out that statistics showed that as a matter of fact illness there had been very small as compared with other districts. Dr. E. W. Hope, the medical officer of health, corroborated the remarks of Alderman Roberts and deplored that correspondence on the subject should have been initiated in the press without the writers first communicating with his department to confirm the accuracy of the statements which he assured the committee were devoid of foundation.

Rating of Charitable Institutions.

At the monthly meeting on Oct. 1st the city council will be asked to approve a report to the finance committee which has been prepared by the town clerk and the controller and auditor of accounts as to the rating of charitable institutions. After referring to a previous decision of the finance committee in the matter the report gives *in extenso* the findings of the Select Committee of the House of Commons which considered the question and which recommended that "all medical hospitals, infirmaries, or other institutions for the care and treatment of persons suffering from sickness or injury or afflicted in mind or body not carried on for profit or gain and supported wholly or in part by voluntary subscriptions or endowments, thereby conferring a benefit on the rates, should be exempted from payment of rates and that powers should be conferred upon the rating authorities to deal with the question wholly or in part." The recommendation of the Select Committee of the House of Commons would not regard as being within its scope many institutions in Liverpool which are maintained by voluntary contributions or endowments, but which could not be brought within the category mentioned by the finance committee of the city council. It would appear from the terms of the Select Committee's appointment that it would not have been justified in extending its inquiry into institutions of the nature alluded to by the local committee. In the opinion of the town clerk and controller the question of the exemption from rating of charitable institutions of whatever kind

they might be was one which could be more equitably dealt with by a general Act of Parliament rather than by a local Act, because there seemed to be no reason why a charitable institution in Liverpool should be exempted and an exactly similar institution in another town should be rated.

Bequests to Liverpool Charities.

By the terms of the will of the late Mrs. Anne Turner of Dingle Head, Liverpool, who died on August 10th last, the following charitable bequests were made: to the Royal Infirmary, the David Lewis Northern Hospital, the Royal Southern Hospital, the Stanley Hospital, and the Children's Infirmary, each £1000. The ladies' charity and the Liverpool dispensaries benefit by £500 each. The convalescent institutions at Woolton and Southport each obtain £200.

Sept. 30th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Bristol Workhouse Infirmary.

VERY soon after the Bristol Union was formed in 1898 it was apparent to the board of guardians that more adequate accommodation would have to be provided for the children under its care, for the sick poor, and for imbeciles. The two workhouses at Stapleton and at Eastville are practically duplicate establishments with double sets of officers performing similar functions in each. At Eastville there are over 1100 inmates, and more than 200 of these are living in wooden and iron buildings which have been described by a member of the board as being absolutely unsuitable for the accommodation of poor, helpless people, while many of the nurses live in a home rented for the purpose quite apart from the workhouse. In order to centralise the administration and to enable a classification of cases to be made it was decided last year to abandon the Eastville workhouse and to erect buildings for the sick, imbeciles, and children near to the Stapleton institution where the aged, able-bodied, casuals, and infants would be accommodated. Suitable plans were selected after a competition among architects, the sanction of the Local Government Board was obtained, and tenders for carrying out the scheme were laid before the board of guardians on Sept. 26th. The committee which had the matter in hand reported upon the whole circumstances and recommended the acceptance of tenders in the sum of about £130,000. The repayment of this amount with interest spread over a period of 30 years would require a rate equal to a little over one penny in the pound upon the present rateable value of the union. It is to be regretted that a majority of the board decided not to proceed further with the undertaking, in spite of the fact that already very considerable initial expense had been incurred. The minority of 25 members included eight lady guardians and the opposition appears to have been led by two clerical guardians, one of whom argued that the provision of a new Poor-law infirmary would affect adversely the subscriptions to the existing medical institutions in the city.

Small pox.

During the week ending Sept. 26th there have been isolated cases of small-pox reported from Barry, Merthyr Tydfil, and Newport. The patient in the last-named town is the mate of a vessel and it is believed that he caught the disease at Swansea where there are still cases occurring. At a meeting of the Swansea board of guardians held on Sept. 25th it was stated that the cost of vaccination during the past year had been £3280.

Sanitary Matters in the Barnstaple Rural District.

At the meeting of the Barnstaple (Devon) rural district council held on Sept. 26th a letter was read from the committee of the Devon county council, stating that three subjects demanded the immediate attention of the district council—namely, a new water-supply was required at Instow, an isolation hospital was also required, and the river Lyn was polluted with sewage. The committee wished to know what steps would be taken to remedy these defects. A communication was also read from the Local Government Board advising the erection of a hospital for any small-pox cases which might arise in the district.

Sept. 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Outbreak of Diphtheria at Kingstown.

SOMETHING like an epidemic of diphtheria has appeared in Kingstown. One death at least has occurred and nine or more patients have been conveyed to Sir Patrick Dun's Hospital. Both the boys' and girls' departments of the infants' schools have been closed on account of the appearance of four cases among the children there. It is difficult to ascertain the number of patients affected, for, it will be remembered, all attempts to induce the Kingstown urban council to adopt the Notification and Prevention of Infectious Diseases Acts have hitherto failed.

The National Hospital for Consumption for Ireland, Newcastle, Co. Wicklow.

The ninth annual report of the board of governors of the National Hospital for Consumption for Ireland has been issued and contains some interesting statements and figures. It appears that close upon 13,000 persons die every year in Ireland from consumption. Moreover, while in England and Wales the death rate has been declining for many years there is a distinct and steady increase in the mortality from that disease in Ireland. The hospital contains only 66 beds at present, but it is expected that the number will be soon largely increased.

Sept. 30th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Children's Court.

BY an Act of the last Legislature of the State of New York an independent court was established for the trial of children. It is officially known as the "Court of Special Sessions, First Division, of the City of New York, Children's Part." It is, as its title implies, but another court-room of the "Court of Special Sessions." The law adds another justice to the five who already make up this court; the terms of judges are so arranged that but one occupies the Children's Court bench and each justice will sit for two months during the year. The object of this new court is not to secure conviction, but rather to send boys to institutions; the underlying principle is so to manage these trials that imprisonment will not, if possible, follow a first offence but that the first offence may be made such a lesson that it will be the last. Though a score of cities in America have juvenile courts no other has an entire building and large equipment of its own and also holds sessions every week-day through the year excepting holidays. The first session opened on Tuesday, Sept. 2nd, with more than 20 children ready for trial; these little culprits are detained overnight in the rooms of the Society for the Prevention of Cruelty to Children when their arrest occurs out of court hours. The prisoners are not hurried and intimidated but are treated with great kindness and firmness, and the frequent result is the truthful recital of their misdemeanours. In various ways the proceedings of this court are entirely novel and every effort is made to effect the result sought after.

Vacation Schools.

The aim of vacation schools is to open the eyes of the children as much as possible to the far-reaching significance of what they already dimly see, to enlarge their interests, and to train their powers of observing, reasoning, and acting, by letting them see and, what is more important, work out for themselves the methods of obtaining food and clothing. Cooking, sewing, drawing, modelling, reading, arithmetic, and writing are all included in this main plan. The playground, a place apart from the street for city children who must remain in the tenement district during the summer—a place of cool and clean environment where the teacher can outwit the Evil One, however embodied—is the first part of the plan of vacation schools. The second purpose is to make use of the idle period of summer to afford manual training in a child's workshop. A third use of the school is to modify ultimately conventionalised educational methods; and further there is the idea of making the vacation school a stepping-stone toward the larger

usefulness latent in the immense public school plants of the cities. All this is still a matter of experiment; there are life and vigour in the fact that its scope in theory and practice is the matter of much discussion. From a recent report it appears that the first school was opened in Boston in 1878 with 48 pupils enrolled. It was conducted much along the lines which have been followed in the development of the vacation school of to-day. The only rules were that the children must come clean and must not use profane language or quarrel; they were allowed to whisper and were not asked to commit anything to memory. They sang and had kitchen-garden work, sewing, drawing, moulding, and paper work. The example of Boston was followed somewhat tardily by other cities. In 1894 four such schools were opened in New York under the supervision of the Association for Improving the Condition of the Poor and were later continued by the city. Two years afterwards Chicago took up the idea, and schools were established in Brooklyn and Cleveland in 1897 and in Philadelphia in 1898. To-day New England takes the lead in the number of cities where vacation schools are in operation.

Success in Professions.

Professor E. G. Dexter has published a study of the manner in which the men and the women, who in the opening year of the twentieth century are prominently before the public, achieved their success in their various vocations. Professor Dexter bases his study upon a recent work entitled, "Who's Who in America?" for 1900. This contains the names of 8602 persons, each of whom has attained a degree of eminence before the public. It is deduced that the probability of achieving success in any profession is increased 5·6 times by a college education. In those callings which pre-suppose a professional, or an extended, preparation science appears to promise the earliest recognition. This is due probably to the fact that the man of science enters upon his life work with a more complete intellectual equipment than most others, and that during the period of preparation opportunities are offered for research and investigation which may bring renown before his real life work is begun. Those who excel so far as educational accomplishments are concerned are engaged as college instructors or as teachers in medicine. Of the eminent medical men 42 per cent. have received academic degrees (honorary degrees are not included), while 6 per cent. have had elementary education alone. Only 7·5 per cent of the medical students of the country, according to the Commissioner of Education, have academic degrees, which would indicate that the probabilities of a physician attaining eminence in his profession are nearly six times greater if he has college training. Professor Dexter considers that it is as a man of science and producer, and not as a practitioner of medicine, that the physician is most largely aided by such training. The scientific societies of physicians undoubtedly stimulate more of their members to original research and investigation than do similar organisations among clergymen and lawyers, and it is here that the broader education counts for most. In contrast to the medical profession 40 per cent. of eminent lawyers and 24 per cent. of prominent clergymen have had neither professional training nor academic instruction beyond the high school. Of the three generally recognised learned professions the medical profession leads in the breadth and perfection of its educational preparations.

Rights of Physicians using Automobiles.

Large and increasing numbers of physicians are using automobile vehicles in their practice and, as they often ride at a rate of speed much greater than the law allows in many cities arrests have been made and the offenders have been brought into court. The plea of the physician very naturally is that he is attending an emergency call and the life of his patient depends upon his immediate presence. The ruling of the courts has thus far been that the physician may exceed the rate of speed required by law while attending to professional calls whatever may be the motor power of the vehicle which conveys him.

Sept. 24th.

FREEMASONRY.—The St. Luke's Medical Lodge of Instruction will hold the first meeting of the winter session at the Criterion Restaurant, Piccadilly-circus, W., on Tuesday, Oct. 7th, at 9 P.M. The secretary is Dr. Eyre, Embankment Chambers, Villiers-street, Strand, London, W.C.

Obituary.

NEIL HARRISMITH MACMILLAN, M.B., C.M. EDIN., M.R.C.S. ENG., L.R.C.P. LOND.

A PROMISING career has been suddenly cut short at its outset by the death of Dr. Macmillan, assistant medical officer in the London County Asylum at Claybury, Woodford Bridge. He was born at Harrismith in South Africa just over 30 years ago, and was educated in the South of France. On selecting medicine as his profession he attended the classes at Edinburgh University, where he graduated as M.B. and C.M. in 1895, and in the same year he took the double qualification of the London Royal Colleges. After holding various resident appointments in Edinburgh he spent some time in Vienna for the purpose of further study. At Claybury Asylum he was highly esteemed by both the patients and the members of the staff. He was an excellent clinician and was devoted to his work, being in the habit of spending hours in the wards daily. At the last meeting of the South-Eastern Division of the Medico-Psychological Association he read a paper on the History of Asylum Dysentery at Claybury, recording his experience of the disease as it affected the female side of the institution and suggesting methods of treatment. On this paper he was greatly complimented by the medical superintendent of the asylum and by Dr. F. W. Mott, pathologist to the London county asylums. By a singular coincidence it was this disease, asylum dysentery, to which he succumbed, the sad event occurring while he was on leave of absence from his duties. At a memorial service the chaplain said that this was the first death of a medical officer actually on the staff of the asylum and that Dr. Macmillan's name would long be held in sympathetic remembrance.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the examination held in September the following candidates passed in the subjects indicated:—

Surgery.—E. W. C. Bradfield (Section II.), St. Mary's Hospital; D. Cotes-Preedy (Section I.), St. George's Hospital and Cambridge; B. C. Ghosh (Section I.), Cambridge; E. H. Griffin (Sections I. and II.), Guy's Hospital; A. T. Harvey, London Hospital; M. E. Martin (Sections I. and II.), Royal Free Hospital; E. J. Miller, King's College Hospital; and G. B. S. Soper (Section I.), Guy's Hospital.

Medicine.—E. W. C. Bradfield (Sections I. and II.), St. Mary's Hospital; C. R. Bradley (Section I.), St. George's Hospital; J. C. S. Dunn, St. Bartholomew's Hospital; I. Griffith (Section II.), London Hospital; M. E. Martin (Section II.), Royal Free Hospital; and C. C. Morgan (Section II.), St. Bartholomew's Hospital.

Forensic Medicine.—E. W. C. Bradfield, St. Mary's Hospital; C. R. Bradley, St. George's Hospital; K. Heanley, Royal Free Hospital; C. C. Morgan, St. Bartholomew's Hospital; and P. J. Pagonis, Athens.

Midwifery.—S. Bentley, Sheffield; P. S. Cooke, Charing Cross Hospital; B. C. Ghosh, Cambridge; and H. Jacques, London Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—E. W. C. Bradfield, J. C. S. Dunn, A. T. Harvey, M. E. Martin, E. J. Miller, and C. C. Morgan.

UNIVERSITY OF DURHAM.—At the third examination for the degree of Bachelor in Medicine held in September the following candidates satisfied the examiners:—

James Alexander Bennett, Henry Mounsey Braithwaite, Llewelyn Alfred Henry Bulkeley, and Herbert Christal, College of Medicine, Newcastle-upon-Tyne; Edgar Fletcher Edmunds, University College, Sheffield; Arthur Henry Fullerton, Albert James Gilbertson, Marshall Haver, Norman Haliburton Hume, and Sophia Bangham Jackson, College of Medicine, Newcastle-upon-Tyne; John George Ogilby Hugh Lane, M.R.C.S., L.R.C.P., Guy's Hospital; George Errington Lloyd and Thomas William Maddison, College of Medicine, Newcastle-upon-Tyne; Aurelius Victor Maybury and Arthur Alan Miller, M.R.C.S., L.R.C.P., Guy's Hospital; Stanley Robson, William Tait Sewell, and Arthur Lewin Sheppard, College of Medicine, Newcastle-upon-Tyne; Oswin Shields, M.R.C.S., L.R.C.P., St. Mary's Hospital; Frederick James Strachan, College of Medicine, Newcastle-upon-Tyne; Samuel George Webb, Birmingham University; and Hermann Wolfe, College of Medicine, Newcastle-upon-Tyne.

THE WATER-SUPPLY OF HONITON.—On Sept. 25th the Honiton (Devon) corporation decided to erect waterworks at St. Cyres at an estimated cost of £4674.

DOG-MUZZLING.—The dog-muzzling order ceased to operate in Cornwall on Sept. 27th and will only continue in force in Plymouth and Devonport and adjacent parts in Devonshire.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—We are asked to state that the appointment of house surgeon to the North-Eastern Hospital for Children advertised in our last issue as falling vacant on Oct. 16th will not now be open till Nov. 21st, and that the successful candidate for the post of house physician which is now vacant will be required to take up the duties on Oct. 16th instead of Oct. 21st as advertised.

LONDON HOSPITAL MEDICAL COLLEGE.—The following is the result of the examination held last week for the entrance scholarships: Price scholarship in science, value £120, Mr. R. C. Roberts; scholarship in anatomy and physiology, value £60, Mr. J. T. Macnab; entrance science scholarship, value £60, Mr. S. J. A. Beale; entrance science scholarship, value £35, Mr. H. Morgan; entrance science scholarship, honorary certificate, Mr. H. R. Davies.

THE HOSPITAL SATURDAY FUND.—The committee of the Metropolitan Hospital Saturday Fund reports that the receipts from workshops from Jan. 6th to Sept. 13th reached the sum of £10,196, as compared with £9865 at the corresponding period of last year. The expenditure was £1470. Since the beginning of the year 21,574 letters of recommendation have been distributed. This number includes 818 letter for convalescent homes.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—The following entrance scholarships have been awarded:—The Livingstone scholarship (100 guineas) to Mr. W. S. Fenwick, the Huxley scholarship (55 guineas) to Mr. E. Quirk, and a universities scholarship (72 guineas) to Mr. R. K. Shepherd. Entrance scholarships have also been awarded to Mr. F. Butler (60 guineas), Mr. T. Hallinan (40 guineas), Mr. F. E. Sprawson (30 guineas), and universities exhibitions (each 36 guineas) to Mr. J. W. Evans and Mr. R. S. Taylor.

A FOUR-HUNDRED DOLLAR PRIZE.—Dr. J. B. Mattison, medical director of the Brooklyn Home for Narcotic Inebriates, offers a prize of $400 for the best paper on the following subject: Does the Habitual Subdermic Use of Morphia cause Organic Disease? If so, What? The contest is to be open for two years from December last to any physician, in any language, and the award will be made by a committee of whom Dr. T. D. Crothers of Hartford, Conn., the editor of the *Journal of Inebriety*, is the chairman. All papers must be in the hands of the chairman of the committee by or before Dec. 1st, 1903, and will become the property of the American Association for the Study and Cure of Inebriety.

UNIVERSITY COLLEGE, LONDON.—Special courses in psychology will be held at this college in the forthcoming session, 1902–1903. A laboratory course in experimental psychology, consisting of lectures and practical demonstrations, will be under Dr. W. McDougall, late Fellow of St. John's College, Cambridge. The class will meet throughout the session once a week. The methods of investigating experimentally all the chief types of elementary mental process will be demonstrated, and students will be afforded opportunities for practice and research. A previous knowledge of the physiology of the senses and of general psychology is desirable. A course of about ten lectures, dealing with special problems in psychology, will be delivered by Professor James Sully.

ACCIDENTAL POISONING OF A MEDICAL MAN.—At Blackpool on Sept. 19th an inquest was held on Mr. William Joseph Dawes, J.P., medical officer of health of Longton, Staffordshire. The deceased, who was 71 years of age, went to Blackpool with his wife about a fortnight previously for the benefit of his health. He however seemed to become worse and had to keep his bed for nearly a week. On Sept. 17th he got up and while retiring to rest about 11 P.M. he took a dose of nepenthe from a bottle on the mantelshelf. He then told his wife that he had taken more than the ordinary dose and as he became worse in a few hours medical assistance was obtained, but he died shortly after 10 P.M. on Sept. 18th. The jury, to some of whom the deceased was well known, returned a verdict of Death from an overdose of nepenthe taken by misadventure, and expressed deep sympathy with Mrs. Dawes.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BRODRICK, C. C., L.R.C.P., L.R.C.S., L.M. Edin., has been re-appointed Medical Officer of Health for the Tavistock (Devon) Rural District Council.

CHAPMAN, J. T., L.R.C.P. & S. Edin., has been appointed Officer of Health for Eltham (Eastern Riding), Victoria, Australia.

CULROSS, J., M.A., M.B., C.M. Glasg., has been appointed Medical Officer to the Cottage Homes by the Newton Abbot (Devon) Board of Guardians.

CUMMINGS, H. L., M.R.C.S., L.R.C.P. Lond., has been appointed Government Medical Officer and Vaccinator at Broadwood, New South Wales, Australia.

DUFFETT, HENRY A., F.R.C.S., has been appointed Medical Officer to the Greenwich Union Children's Home, Half-Way-street, New Eltham.

ELLIS, L. E., M.B., M.Ch. Syd., has been appointed Government Medical Officer and Vaccinator at Manilla, Sydney, Australia.

GARDNER, A. JOSEPHINE, M.B., Ch.B. Edin., has been appointed Resident Medical Officer in the Bruntsfield Hospital for Women and Children, Edinburgh.

GOUGH, JOHN HARLEY, M.D., F.R.C.S. Edin., has been appointed Admiralty Surgeon and Agent for Torquay and Babbacombe.

HAYMAN, C. A., M.D. St. And., F.R.C.S., F.R.C.P. Irel., L.D.S. Eng., has been appointed Honorary Assistant Dental Surgeon to the Bristol Royal Infirmary.

HOLMES, J., M.D. Edin., has been appointed Certifying Surgeon under the Factory Act for the Bury District of the County of Lancaster.

JACKSON, A. G., M.D. Brux., L.R.C.P. & S. Edin., has been appointed Officer of Health for the North and West Ridings of the Shire of Ripon, Victoria, Australia.

JOHNS, H. D., M.D. Durh., has been appointed Medical Officer of Health for the Hornsea Urban District Council.

KENNEDY, T. J. M., M.B., Ch.B. Melb., has been appointed Health Officer for the Port of Geelong, Victoria, Australia.

MCKENZIE, J. H., F.R.C.S. Edin., has been appointed Public Vaccinator for the Metropolitan and Midland Districts of Victoria, Australia.

MOFFITT, C. G., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Medical Officer in the Department of Lunacy, New South Wales, Australia.

MYERS, WARD, C. F., M.R.C.S., L.R.C.P. Lond., Professor of Physiology at University College, Sheffield, has been appointed Lecturer in Physiology in the Charing Cross Hospital Medical School.

RAW, NATHAN, M.D., M.R.C.P. Lond., F.R.S. Edin., D.P.H., has been appointed Physician to the Sanatorium for Consumption at Heswall, Liverpool.

RENSHAW, KNOWLES, has been appointed Assistant Physician to the Manchester Hospital for Consumption and Diseases of the Throat and Chest.

SADLER, F. J., M.B., B.Ch. Oxon., has been appointed Medical Officer to the Barnsley Corporation.

SHIELDS, A., M.D. Edin., J.P., has been appointed President of the Medical Board of Victoria, Australia.

SMITH, J. F., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Whithorn District of the County of Wigtown.

SPROULE, W., M.D., M.S. Edin., has been appointed Government Medical Officer and Vaccinator at Wyalong, New South Wales, Australia.

TAYLOR, W. K., L.R.C.S., L.A.H. (Ireland) has been appointed Medical Officer for the Milton Abbot District by the Tavistock (Devon) Board of Guardians.

THOMAS, T. P., B.A. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Medical Officer to the Aberystwyth Infirmary.

THWAITES, J. S., M.B. Melb., has been appointed Public Vaccinator for the Midland District of Victoria, Australia.

WALLS, E. J., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Halesowen District of the County of Worcester.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

COUNTY LUNATIC ASYLUM, Lancaster.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, &c.

CROYDON UNION INFIRMARY, Mayday-road, Croydon.—Resident Assistant Medical Superintendent and Dispenser. Salary £130, increasing to £160 per annum, with apartments, rations, and washing.

DOWN DISTRICT LUNATIC ASYLUM, Downpatrick.—Junior Male Assistant Medical Officer, unmarried. Salary £100 per annum, with apartments, board, washing, fuel, light, and attendance.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Physician; also Pathologist and Registrar. Honorarium of £100. Also Officer for the Electrical Department.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Pathologist and Curator to the Museum. Salary 50 guineas per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Resident Medical Officer for six months. Salary £130 per annum, with board and residence. Also Resident House Physicians for six months. Honorarium £25.

JENNER INSTITUTE OF PREVENTIVE MEDICINE, Serum Department, Aldenham, Herts.—Assistant Bacteriologist. Salary £200 per annum, with rooms.

LEEDS GENERAL INFIRMARY.—House Surgeon. Board, lodging, and washing.

LONDON COUNTY ASYLUM, Horton, near Epsom.—Junior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

LONDON COUNTY COUNCIL.—Medical Officer to certain employees residing in three districts in E., N.E., and S.E. London.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST (In-patient Department), Bowdon, Cheshire.—Resident Medical Officer. Salary £100 per annum, with board, apartments, washing, and railway contract to Manchester.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician. Also House Surgeon. Both for six months. Salary at rate of 50 guineas a year and board and residence.

RICHMOND, SURREY, ROYAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board and apartments.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Resident Male House Physician and Male House Surgeon; also Female House Physician and Female House Surgeon, all for six months. No salary, but board, &c., provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with apartments, board, and washing.

ROYAL HOSPITAL SCHOOL, Greenwich.—Dentist. Salary £75 per annum.

ROYAL SEA BATHING HOSPITAL, Margate.—Resident Surgeon, to act as Junior for six months and Senior for a like period. Salary of the two offices at rate of £80 and £120 per annum respectively, with board and residence.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Demonstrator of Anatomy. Salary £70 per annum.

SEAMEN'S HOSPITAL SOCIETY (*Dreadnought*), Greenwich, S.E.—House Physician (salary £75 per annum); also House Surgeon (salary £50 per annum), both with board, residence, and washing.

SHEFFIELD ROYAL INFIRMARY.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board, washing, and residence.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Resident Assistant House Surgeon for six months. Salary at rate of £60 per annum, with board, lodging, and laundry.

WINDSOR AND ETON ROYAL DISPENSARY AND INFIRMARY.—House Surgeon, unmarried. Salary £120 per annum, with residence, board, washing, and attendance.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £110 a year, with board, lodging, and attendance.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory Act at Manningtree, Essex; at Mansfield, Nottingham; and at Adlington, Lancaster.

Births, Marriages, and Deaths.

BIRTHS.

SALISBURY.—On Sept. 27th, at Alveston House, Evering-road, Stoke Newington, N., the wife of Charles Ramsden Salisbury, L.R.C.P., M.R.C.S. Eng., of a son.

SHERREN.—On Oct. 1st, at 40, Devonshire-street, Portland-place, W., the wife of James Sherren, F.R.C.S. Eng., of a son.

SIMPSON.—On Sept. 19th, at The Highlands, Woodrow, Amersham, the wife of W. J. Simpson, M.D. Aberd., of Gloucester-place, Portman-square, of a daughter.

MARRIAGES.

BAGSHAW—MARTIN.—On Sept. 23rd, at St. Paul's, Hampstead, Thomas Washington Bagshaw, M.D. Cantab., of Rock Ferry, Cheshire, to Amelia Martha, youngest daughter of the late Henry Martin, Esq.

JAMESON—COPLAND.—On Sept. 27th, at Holy Trinity Church, Eltham, Surgeon Robert Dundonald Jameson, R.N., second son of Surgeon-General James Jameson, C.B., late Director-General A.M.S., to Mabel Graeme, daughter of H. Copland, Esq.

THOMPSON—SIMPSON.—On August 21st, at St. Mark's, Darling Point, Sydney, J. Ashburton Thompson, M.D., D.P.H., Chief Medical Officer of the Government of New South Wales, to Lilian, widow of the late G. H. C. Simpson, barrister-at-law, elder daughter of Sir Julian Salomons, K.C.

WILLIAMS—McCLURE.—On Sept. 25th, at St. Andrew's Church, Tarvin, Chester, by the Rev. T. J. Evans, vicar, Jos. R. Williams, M.B., C.M. Edin., of Conway, to Agnes, daughter of Admiral John McClure, Tarvin Hall, Chester.

DEATHS.

BROUGHTON.—On Sept. 28th, at Bank View, Batley, Arthur Walter Broughton, L.F.P.S.G., L.M., aged 49 years.

CAREW.—On Sept. 24th, at Srinaghur, Kashmir, Colonel Richard Hugh Carew, D.S.O., R.A.M.C. (retired), aged 61.

WATLING.—On Sept. 26th, at Exmouth, Brigade-Surgeon Charles Wyat Watling, A.M.S. (retired).

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CONSUMPTION AND THE "PENNY MEDICAL LIBRARY."

ANY attempt to spread sound knowledge of the ways in which pulmonary tuberculosis is commonly acquired and spread and of the chief means by which it is to be prevented and cured is naturally an effort which appeals very directly to all our readers. To what extent such an aim may be furthered by dissemination of the "Penny Medical Library's" pamphlet on "Consumption" is a more doubtful question. Generally speaking, there is nothing very wrong or inaccurate in the production except the printing which in several places is so confounded as to convey no sense whatever. The pamphlet modestly claims to contain the "sum of human knowledge regarding consumption." We fancy that this idea will be entirely dissipated if the author will carefully read in any recent text-book the chapter on pulmonary tuberculosis. The bacteriological knowledge displayed in the pamphlet is of the crudest. From a practical point of view, however, it is to the prescriptions that we must most positively take objection. It may be taken as a wide principle that definite prescriptions should never be written in a production of this kind. The readers of the "Penny Medical Library" are little likely to exercise discrimination. The prescriptions contain powerful drugs and the directions as to the class of case or the kind of occasion for which the various remedies are most appropriate are neither plentiful nor explicit. Let popular literature by all means spread true knowledge of the importance of hygiene and cleanliness in manners and person in controlling the spread of consumption; by no means though let it lead the afflicted and their friends to become their own physicians in the battle with consumption.

TO SOFTEN WATER.

To the Editors of THE LANCET.

SIRS,—Would you or any of your readers give me any information as to the cheapest and simplest method of softening water not for drinking? The quantity required to be softened is about 30 gallons per diem and the degree of hardness is 17° temporary and 4° permanent.

I am, Sirs, yours faithfully,

Sept. 28th, 1902. HARD WATER.

*** A simple process which has given good results within our knowledge consists in adding to every gallon of water 2·86 grains of washing soda for each degree of hardness, allowing the chalk to subside and pouring off the clear water, or the water may be filtered after the chalk has formed.—ED. L.

GERMAN LEXICOGRAPHY.

ACCORDING to the *Engineer* a report has been issued recently concerning the progress that has been made in preparing the great German technical lexicon. The getting together of the dictionary part of the work will be finished about the end of 1904. Then the arranging, looking over, and "touching up" of several millions of words, among which there will be thousands of duplicates and triplicates, will take two years at least. The editors therefore hope that the manuscript will be ready for the press towards the end of 1906. The work is being contributed to by 266 German societies and by 25 English and 25 French societies; of individuals there are 1333 German, 229 English, and 192 French contributors at work. The editorial staff is desirous of obtaining the active coöperation of all persons interested in any branch of engineering or technical science.

THE WEIR-MITCHELL TREATMENT.

To the Editors of THE LANCET.

SIRS,—A patient of mine is desirous of undergoing the "Weir-Mitchell" treatment in some institution where the treatment could be fully carried out both as regards the diet and the massage. I should be glad if some of your readers could supply me with the necessary information as to institutions where this treatment is carried out and the terms. I should say that my patient is a male.

I am, Sirs, yours faithfully,

W. M. WILSON, M.B., Ch.B. Edin.

6, North-terrace, Stockton-on-Tees, Sept. 25th, 1902.

THE SYSTEM OF PARISH NURSING.

To the Editors of THE LANCET.

SIRS,—Your correspondent "A Perplexed General Practitioner" seems to be placed in the same awkward situation as were the medical men in this town a short time back. A district nursing association was formed and, like your correspondent's case, under the auspices of the parson, or rather the parson's wife. The medical men were nominally on the committee but they received no notice of any committee meeting when the drawing up of the rules was taking place. It was not long, however, before these rules were infringed and the medical men struck. A meeting of the committee was held, the lay portion of which could not understand the gravity of the situation, and finally a general meeting was held, when a member, a solicitor, got up and proposed that the nurse should go to any case for which she

might be sent free of charge pending the decision of the committee as to whether it was a suitable case. The members of the association immediately saw that this meant free doctoring and practically voted for it *en masse*, the only dissentients being the medical men and guarantors. I immediately withdrew as a guarantor and we determined and announced wherever possible that we would not attend any case where the nurse went or had in any way treated. This state of affairs continued for about a couple of years and how much longer it would have continued I do not know, but fortunately the parson got a preferment elsewhere and with her chief supporter gone the nurse also went. The position seems fairly hopeless to deal with as we have no power to remove the parson or in many cases make him see reason; and as regards the nurse, unless she is a member of a nursing institution like the Queen's Jubilee Institution, there is no getting at her except through the coroner's court. The only way is totally to ignore her in the hope that in time she will get enough rope to hang herself.

I am, Sirs, yours faithfully,

Whittlesey, Sept. 21st, 1902. JOHN J. WADDELOW.

VACCINATION QUESTIONS.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me on the following point? I am medical officer of a very large union workhouse. As such I am paid a fee of 2s. 6d. for each case of vaccination of an infant born in the work house. Am I also entitled to the fee of 1s. capitation or visiting fee for each case the same as I get in the district for which I am public vaccinator? Thanking you in anticipation,

I am, Sirs, yours faithfully,

Sept. 20th, 1902. X. Y. Z.

*** The fees to which medical officers are entitled are those which are stated in their contracts under which they perform their duties.—ED. L.

SNAKE-BITE AND SNAKE-LORE.

To the Editors of THE LANCET.

SIRS,—With reference to the annotation entitled "Snake-bite and Snake-lore" which appeared in THE LANCET of Sept. 20th, p. 826, the following may be of interest. An old lady, a native of Kent, once told me that many country people kept in their cottages a bottle of adder's fat for use in the event of anyone being bitten by a viper. But this was not the end of the old lady's therapeutic knowledge. She also told me that when a child was ailing some people bound the half of a sweetbread to the soles of each foot, allowing the poultice to remain in position for several days. This would "draw" the disease, which could be seen on the sweetbread. The putrefactive condition of the poultice was of course recognised by the natives as the disease.

I am, Sirs, yours faithfully,

Sept. 26th, 1902. FOLK-LORE.

EMPLOYMENT FOR JEWISH ARTISANS IN SOUTH AFRICA: AN APPEAL.

To the Editors of THE LANCET.

SIRS,—Owing to the depression in many branches of trade in the East-end there are a number of really hard-working artisans belonging to the Jewish faith who cannot obtain regular employment in London. Work can be found for them in South Africa, where, in contrast to the treatment of the Jews in Roumania, the law contains no discrimination against Jews, Russians, or others, and where they will enjoy equal franchise rights with British subjects; but the great difficulty with these people is to find sufficient money to pay their passage. It is, then, to overcome this difficulty that we venture to solicit any help from your readers and all contributions will be most thankfully acknowledged. We are, Sirs, yours faithfully,

THE SOUTH AFRICAN AND COLONIAL EMPLOYMENT ASSOCIATION
(W. PIEPER, Secretary).

14, Fenchurch-street, London, E.C., Sept. 29th, 1902.

FOREIGN BODIES IN THE LEGS.

THE publishers of the *Army and Navy Gazette* have forwarded to us, as it appeared in their journal, the advertisement upon which we commented, and which we took from a contemporary, in our issue of Sept. 27th. The publishers say that "in the transference the commas managed to take flight." In the correct version of the advertisement a comma appears after the word "injured" and another after the word "train." These did not appear in our note on the advertisement, which, however, was copied exactly from the *Westminster Gazette*.

THE RESETTING OF CLINICAL THERMOMETERS.

MANY medical men must be aware of the risk to the instrument caused by the practice of knocking or of swinging down the index in a clinical thermometer. Mr. G. H. Zeal, a clinical thermometer manufacturer of 82, Turnmill-street, E.C., has devised a thermometer with an ingenious device for resetting the index. The thermometer is of the ordinary description with the exception of the upper end which is expanded into a flattened bulb. This bulb contains mercury, and by a gentle pressure on it the mercury is projected down the tube. As there is presumably a small portion of gas between the top of the index and the mercury at the top of the tube, directly the latter mercury is forced into the tube the index descends. There is practically no danger of breaking the bulb if the pressure is applied steadily, and the index in the specimen submitted to us answers very readily. We should say that the device will be found to be of great use.

EXPERIENCE UNNECESSARY.

WE extract the following advertisements from the *Church Times* of Sept. 26th:—

SANITARY INSPECTORS. — Men and Women desiring these Appointments write to Sanitary, 151, Knights Hill-road, W. Norwood, S.E. Experience unnecessary. Salaries £100 to £350. Rapid postal preparation. Many successes. Model answers.

MR. H. A. COLVILE, Warden of the Evangelist Brotherhood, Wolverhapton, will be pleased to hear from any one suffering from Chronic Internal, or other trouble. Those given up by physicians specially invited, and he will put them in the way of getting cured without medicines and drugs.

We hardly know how to comment upon the offer of "Sanitary" to foist upon the public sanitary inspectors with no experience save that gained by rapid postal preparation. In all walks of life the coach regards nothing but the success of his pupil, but "Sanitary's" advertise ment is a very naive admission of the fact. As for the Warden of the Evangelist Brotherhood at Wolverhapton (*sic*) he would seem to invite a trial for manslaughter.

M.R.C.P.—Levico water is the strongest natural arsenic water known to therapeutists. It occurs, as does also another strong arsenic water—Roncegno water—in springs near Trento in the Southern Tyrol. The dosage is small and the water can be drunk diluted. The patient should proceed to increased doses cautiously. Levico water is recommended by Sir Hermann Weber in the article in Allbutt's "System of Medicine" upon Balneology and Hydrotherapeutics for lymphatic and glandular disease, for certain chronic skin affections, and in malarial cachexia. The water contains as well as arsenic a large proportion of sulphate of iron. The London agents for the sale of the water are Messrs. A. and M. Zimmermann, 9 and 10, St. Mary-at-Hill, E.C.

Simplex asks us a question the answer to which can only be definitely determined by the legal interpretation of his agreement. While A and B are partners they certainly have each a right in choosing the "locale" of an additional place of business, but it is obvious that such "locale" should be chosen for their mutual benefit. The question is whether the additional surgery would be more remunerative at P. or at K. The next question is which of the two partners will be the more inconvenienced if the additional surgery is placed where he does not want it. With these facts established A and B ought to be able to come to an amicable arrangement either by talking the matter over between themselves or by inviting some common friend to arbitrate.

L. T. A.—Our correspondent is thinking of a pamphlet by Dr. Richard Mead, published by order of King George I., concerning the prevention of plague. The pamphlet was entitled "A Short Discourse concerning Pestilential Contagion and the Methods to be Used to Prevent it," and appeared in 1720 when an epidemic of plague was raging in Marseilles. Dr. Norman Moore, in his life of Mead in the National Dictionary of Biography, says that the pamphlet was in accordance with the modern views in that more stress is laid upon the necessity of isolation of the sick in suitable places than upon general measures of quarantine.

Portuguese.—To practise legally in Portugal itself it would be necessary for our correspondent to apply for examination at one of the recognised medical schools, either at the University of Coimbra or at the medical schools at Lisbon or Oporto. Attendance for a course of study is not necessary, but the examination would be in the subjects of the school curriculum. The fees are about £40. It is understood, however, that the authorities are very lax in enforcing the regulations and presumably this would apply in a larger degree to some parts of Portuguese territory.

Medicus.—We certainly think that the distinction gained is one that can properly be recorded in the Medical Directory. The medallists of London University very usually mention their achievements in the Medical Directory and the graduates of the Scottish Universities state if they acquired their doctorate "with highest honours," "with special honours," or with a "first-class."

Red Hands.—The ordinary causes being absent we fear that our correspondent must abide under her misfortune which, after all, is not a very serious one.

Dr. Martindale C. Ward.—The nurse had certainly no right to add to our correspondent's treatment without first obtaining his permission

During the week marked copies of the following newspapers have been received:—*Tenby and County News, Belfast News, Dublin Evening Telegraph, Lancaster Guardian, Bradford Observer, Sheffield Daily Telegraph, Municipal Reformer, Daily Express, Standard, Bristol Mercury, Windsor and Eton Express, Westminster Gazette, Sunday Times, Derbyshire Times, Lincolnshire Echo, Burnley Gazette, Reading Mercury, Herts Advertiser, Times of India, Aberdeen Free Press, Lancashire Post, Plymouth Morning News, Western Mercury, Yorkshire Post, Pioneer Mail, Devon and Exeter Express, Burnley Express, Scotsman, The Hospital, Daily Telegraph, &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 2nd, 1902.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Sept. 26	30·44	S.W.	...	102	70	48	48	49	Foggy
,, 27	30·39	N.	...	100	69	46	48	49	Foggy
,, 28	30·41	N.	...	98	58	49	47	55	Cloudy
,, 29	30·23	N.E.	...	66	57	48	48	50	Cloudy
,, 30	29·97	N.E.	0·01	77	58	49	47	50	Cloudy
Oct. 1	29·86	N.E.	0·04	98	60	50	50	53	Raining
,, 2	29·91	E.	...	59	54	51	50	53	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), St. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (4 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (11th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic 10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (8th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Lewers and others. Short Communication: A Uterus showing Rapidly Growing Epithelioma of the Cervix, Death from Recurrence five months after Removal. Paper:—Mr. J. W. Taylor: Complete Inversion of the Uterus of Seven Months' Duration, Failure with Repositors, Anterior Vaginal Cœliotomy, Anterior Uterotomy and Replacement, Recovery.

HUNTERIAN SOCIETY (London Institution, Finsbury Circus, E.C.).—8.30 P.M. Dr. S. Sharkey: The Cardiac Muscle from a Clinical Point of View. (First Hunterian Lecture.)

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.15 P.M. Demonstration of Cases of Interest.

THURSDAY (9th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Prof. J. W. Taylor, Mr. B. Jessett, and Dr. Macnaughton-Jones. Papers:—Mr. Jessett: Some Complications arising subsequently to Cœliotomy. Short Communication:—Prof. Taylor: A Case of Uterus Bicornis with Rudimentary Right Horn.

FRIDAY (10th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. L. Guthrie and Dr. F. E. Batten: On Unilateral Atrophy of the Optic Nerve associated with Hemiplegia of the Opposite Side.—Dr. A. Francis (Brisbane) (introduced by Dr. G. MacDonald): The Nasal Treatment of Asthma.—Mr. A. W. Mayo Robson: Ruptured Crucial Ligaments and their Repair by Operation.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. F. Payne: Clinique. (Skin.)

TUESDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Sir W. H. Broadbent: Clinique. (Medical.)

WESTMINSTER HOSPITAL (Broad Sanctuary, S.W.).—4.30 P.M. Mr. Tubby: Surgical Cases. (Post-Graduate Clinical Demonstration.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. R. Russell: Anatomy of the Spinal Cord (with Lantern demonstration).

WEDNESDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Cantlie: Clinique. (Surgical.)

ROYAL LONDON OPHTHALMIC HOSPITAL (Moorfields, City-road, E.C.).—1 P.M. Mr. Nettleship: Clinical Lecture.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Opening Address by Prof. Dr. Wilh. Erb (Heidelberg).

THURSDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Lees: Chorea.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. A. Baldwin: Treatment of some Injuries and Emergencies.

CHARING CROSS HOSPITAL.—4 P.M. Dr. Bruce: Medical Cases in the Wards. (Post-Graduate Course.)

FRIDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. D. Grant: Clinique. (Ear.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: The Preparation of Patients, Instruments &c., before Operations.

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